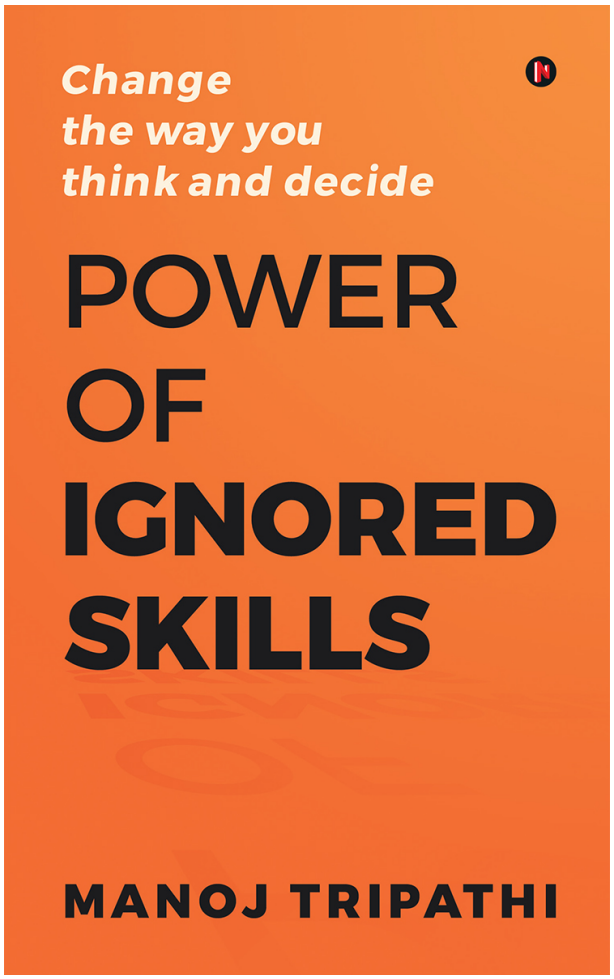
Change the way you think and decide

POWER OF IGNORED SKILLS

BOOKS & MAGAZINES IN ENGLISH
vk.com/public169240848

MANOJ TRIPATHI

SHOUT
SHARE
IT


Change
the way you
think and decide
POWER
OF
IGNORED
SKILLS
MANOJ TRIPATHI

POWER OF **IGNORED SKILLS**

Change the way you think and decide

MANOJ TRIPATHI

notionpress.com

INDIA · SINGAPORE · MALAYSIA

Notion Press

No.8, 3rd Cross Street,
CIT Colony, Mylapore,
Chennai, Tamil Nadu – 600004

First Published by Notion Press 2020
Copyright © Manoj Tripathi 2020
All Rights Reserved.

eISBN 978-1-64951-878-1

This book has been published with all efforts taken to make the material error-free after the consent of the author. However, the author and the publisher do not assume and hereby disclaim any liability to any party for any loss, damage, or disruption caused by errors or omissions, whether such errors or omissions result from negligence, accident, or any other cause.

While every effort has been made to avoid any mistake or omission, this publication is being sold on the condition and understanding that neither the author nor the publishers or printers would be liable in any manner to any person by reason of any mistake or omission in this publication or for any action taken or omitted to be taken or advice rendered or accepted on the basis of this work. For any defect in printing or binding the publishers will be liable only to replace the defective copy by another copy of this work then available.

Dedicated to my dear Mom and Dad

CONTENTS

Preface

1. Power of Observation
2. Power of Connecting the Dots
3. Power of Communication
4. Power of Purpose
5. Power of Dreams
6. Power of Out-of-the-box Thinking
7. Power of Perseverance
8. Power of Deep Diving
9. Power of Prediction

Acknowledgements
Disclaimer
Bibliography

PREFACE

This book is all about the importance of skills, which are not so talked about, but they play a very significant role in our success.

Skills are the expertise, or talent needed to do a task effectively. Simply put, you require skill to do anything and everything; currently, you are reading this book because of the skill of reading. You went to market driving the car; thus, you exhibited driving skill. In the market, while buying stuff, you compared two products; this means you displayed your evaluation and decision-making skill (good or bad). Therefore, skill is something which is very common and seems ordinary. Still, it plays an extraordinary role in our life as skill determines our salary or earning, respect, and position in society.

Have you ever wondered why people, who have an MBA education from Ivy League Schools, get paid more? These colleges are known to develop skills which are required to grow the business of the corporation.

Skills help us to succeed in life. The best thing about a skill is that it can be acquired. That is why, immediately after an ordinary college degree, and despite not having many skills, people still get a job. It is because employers believe that if the attitude is right, the skill can be developed in their employees.

Through various anecdotes, I have tried to prove the importance of some necessary skills, which we generally tend to ignore. I am not trying to say that we don't believe in those skills, but having these skills are so common, that enough attention is not paid to them; hence, I have concluded, that these are ignored skills.

To convince you about the importance of these skills, I have cited many examples of the ancient and contemporary world. Most of the cases, they are

in the form of short stories to make things interesting. Of course, the purpose of this book is to share knowledge about life skills, and social skills.

Now the question arises, despite knowing that skills are essential and that they help us in our lives, why do we ignore some of them? To arrive at an answer, let me ask you, isn't it true that our weakness is not visible to us? You know very well that you can become a better person, by removing your weaknesses, but you still do not identify it yourself. For example, those who are overweight know its consequences, but still do not act to achieve fitness. Obviously, they ignore the problem.

The same way, it's natural that something that is very obvious skips from our mind, or we keep procrastinating.

The nine ignored skills or concepts, which are covered in this book, are:

1. Power of Observation
2. Power of Connecting the Dots
3. Power of Communication
4. Power of a Purpose
5. Power of Dreams
6. Power of Out-of-the-box Thinking
7. Power of Perseverance
8. Power of Deep Dive
9. Power of Prediction

I am sure you have heard each of these skills. Before reading this book, just ask yourself, have you actively tried to improve these skills? If yes, then I presume you are in the top, or middle management of a company; if not, you are trying to jump into middle management.

While writing this book, I have chosen a different kind of skills to cover varied aspects; and therefore, created more opportunities for sharing various

stories, and examples. There are more than 50 short stories in this book, making things simple and interesting.

Enjoy reading!

CHAPTER 1

POWER OF OBSERVATION

"People's minds are changed through observation and not through argument."

– Will Rogers

Observation is an action or a process of carefully watching someone or something. Observation is simply a way of understanding the world we live in, but is it really simple to observe? What makes a few of us more observant and, on the contrary, why do others simply ignore or fail to register events around them?

Whenever someone from another organisation visits your company and presents their proposal or expertise, aren't you trying to observe—their body language, dressing sense, communication and behaviour, confidence level, way of content delivery, and quality of content? All these observations help you form a perception about the visiting person and his organisation. Whether you observe actively or passively, your observation skill helps you in your personal and professional life.

Our brain is always at work; it keeps observing things. You may never pay attention, but somehow subconsciously your brain registers events, analyses, and decides actions, or reactions.

For instance, while driving, you pay attention to ensure that no one is crossing the road or coming in front of your car; similarly, you automatically apply brakes while nearing a hairpin bend. This happens, because your brain observes, assesses and processes the information; it is fed through your eyes or ears, and then takes the appropriate decision without you having to intervene.

Now, let's digress a bit from the present to the past, to understand how observation skill has helped the humankind. Have you ever thought about why Homo sapiens (humans), are the superior species that ever walked on Earth? Why are humans ruling the land despite being inferior to other animals in terms of physical strength, speed, and agility?

A human child cannot survive for years without help from parents, whereas a three-month-old kitten, can independently manage its life. A human child takes almost a year, even to stand on its feet and walk, but we see how a newborn calf manages to stand on its feet and starts floundering when it is just a few days old.

Imagine a fully-grown adult, lest a child, to fight with a two-year-old lion, whom do you think is likely to win? The answer is obvious, but I'll leave it to you to decide.

Let us come back to the critical question, 'Why are homo sapiens the superior species?'

The human race has evolved from a cave-dwelling troglodyte to today's modern humans capable of making space stations.

Thanks to the ability to think and transfer knowledge through generations, it has helped humans reach the pinnacle of success. Now before knowledge transfer, it's essential to gain knowledge. Humans gain knowledge through observing the happening around them or through someone else's experiences.

Thus, the key to this evolution is the ability to observe, and then critically think about it. The observation then led to knowledge. The knowledge of a human transferred to fellow humans.

This transfer of learning became a possibility through communication. Long before the invention of scripts, how do you think information or learning passed through generations? It was through verbal communication and memorising it. Ancient Indian religious, and scientific learnings from Vedas passed through generations via listening, *Sruti*, and memorising, *Smriti*, this tradition is still in practice in many folds of religious education.

Therefore, observation worked as a building block of knowledge.

If we study ancient civilisations of Egypt, Central Asia, Latin America, Indus valley, and later Vedic period—we see that thousands of years ago, wise men researched medical science, astrology, and mathematics; and wrote a treatise with their observation. Generation after generation, people studied, documented, and improved the repository. All these happened because of observation led learnings.

Malcolm Gladwell, in his brilliantly written book, *Blink*, has explained the importance of the phenomenon called 'thin-slicing'. He argues that the human brain can process a small amount of information, a thin slice, and draw incredible conclusions. This is made possible through a repository of data in our mind, which is accumulated through years of observation.

Today, we have powerful telescopes and satellites to help scientists calculate the precise date and time of the next eclipse or any other terrestrial phenomenon.

You ever wondered how thousands of years ago, Egyptians were able to forecast next eclipse with precision?

Now we have scientific evidence that many ancient civilisations knew about planetary movements, solar system, and position of stars. They did this without even having any advanced machinery back in those days.

Imagine the tedious task of noting the daily, weekly, monthly, and yearly variation in the position of planetary objects, and analysing them to predict the next planetary phenomenon accurately.

This extraordinary feat was possible because of years of minute observation.

Evidently, the knowledge we have today is an outcome of continuous learning, which was saved and communicated throughout human history. Thus, the power of observation and the ability to communicate has helped humans conquer the world.

In further sections of the chapters, we will go through evidence of the power of observation.

1.1 An Apple Can Change Everything

Three centuries ago, a man was enjoying the English summer under the shade of an apple tree. Apples were ripe and were falling here and there. The man observed the apples fall and wondered "why are the apples falling down?"

Falling of apple was not a unique phenomenon, but he reasoned with himself, "Why does an apple fall on the ground? Why downward, instead of falling sideways, or going straight into the sky?"

Indeed, the question was quite silly, but eventually, this man's observation, of this inconsequential event led him to bring, the theory of gravity, in the year 1667.

He went on to become a great scientist, Sir Isaac Newton.

Isn't it amazing that observation of even obvious things can be very radical, or open new doors that seem non-existent to the most?

Let us take a coffee break, not in literal terms, but to understand how observation and actions can revolutionise how we all drink coffee today.

1.2 Coffee and Count of the Filter Cone

If we list the best gifts from the USA to the world, then in all possibility, it will be blue jeans, rock-n-roll, and coffee.

However, many do not know, coffee got a slow start in the US, and a revolt against the British King George III in 1773, led to the coffee revolution. Boston Party was the reason behind the mass switch from tea to coffee in the US.

Fast forward 200 years from that event in the early seventies, premium coffee shops, were gaining popularity in the United States. To tap the growing market demand, an ambitious entrepreneur opened a new coffee shop in Seattle in 1971.

The new brand gained popularity among masses and was on course to become what it is now. Nevertheless, there was a twist.

This coffee shop chain procured plastic cone filters from a company called, Hammarplast.

One day, Howard Schultz, General Manager of Hammarplast, inspecting through the sales records, observed an interesting trend. He found that a small coffee shop chain in Seattle is buying an abnormally high number of plastic cone filters.

Interested and fascinated with this kind of sales, Howard decided to pay a visit. During his visit to the coffee shop, he found nothing unusual; it was a typical coffee shop just like any other.

He asked for a coffee, and this is where he found the difference. Two things pleasantly surprised him: knowledge of employees about coffee and second, their customer service.

He observed that none of the staff were rushing; they each talked calmly, discussed coffee tastes, and made suggestions to consumers based on their taste needs. Additionally, the ambience allowed customers to sit and sip while talking to friends, and families.

Howard Schultz was so impressed, that he joined this coffee shop chain, as the marketing director, after some time. After a few years of working there, he had a difference of opinion with the coffee shop owner and resigned. Somehow, he was so fascinated that he managed to acquire that coffee shop chain later on.

Today the turnover of this coffee chain is over 20 billion USD and has footprint worldwide. This coffee chain market capitalisation, made Howard Schultz, one of the wealthiest people in the world.

Any guesses?

Yes, you are right—it is Starbucks!

If there was a single most crucial thing, which Howard did right in his lifetime, it is that he observed. He used the power of his observation to unfold the possibilities of future, unbox something extraordinary, and so did Newton in the earlier story.

Do you use the power of observation?

Yes, no, or maybe.

Your answer can be anything, but let me tell you that you are using the power of observation every day, without realising or thinking about it.

Previously in the chapter, I mentioned the connection between observation and humankind; let us explore more about it.

1.3 Role of Observation in Human Life

The most common, and straightforward method for getting information about everything around us, is to observe. Hence, observation acts as a fundamental and the primary way of getting information about anything.

However, it must be kept in the mind, that observation is not just seeing things, but it is all about carefully examining those things, and to make a sensible judgement about them.

Improving observation skills allows you to "listen" with more than just your ears, and make better decisions and perceptions. It also enhances the ability to interact with others and to respond appropriately. Both are key to success in professional and personal life. In the workplace, a good employee listens well and is aware of what is happening around him.

Observation is an integral part of learning. Theoretically, the most common form of learning is observational learning. Observational learning describes learning through watching others, retaining the information, and then later replicating the observed behaviours.

There are several other learning theories, such as classical conditioning, and operant conditioning. These theories help emphasise how direct experience, reinforcement, or punishment leads to learning by individuals.

However, one may argue that a great deal of learning happens indirectly; for example, imagine how a kid watches his parents waving at each other, and then imitates these actions. Kids learn through this process of watching and imitating others. In psychology, this is known as, observational learning.

Observational learning continues throughout one's life, but it tends to be the most common during childhood, as children learn from elders and society. Observation also plays an essential role in the socialisation process. Children often learn how to behave, and respond to others by observing how their parents interact with each other, and other people. That's why parents need to act a 'certain way,' so children do not learn bad manners. That's why, in popular culture, people judge parents based on their children's behaviour.

Famous Canadian–American psychologist, Albert Bandura, spent his life researching—learning through observation. Through experiments, he demonstrated that we are naturally inclined to engage in observational learning.

Children as young as just 21 days old have shown to imitate facial expressions and mouth movements. Isn't it amazing?

In his famous Bobo doll experiment in 1961, Bandura demonstrated that young children would imitate an adult model's violent actions. In the experiment, children were shown a film, in which an adult repeatedly hit a giant, inflatable balloon doll. After viewing the film clip, children were allowed to play with a real Bobo doll, just like the one they saw in the film.

The research proved, that the children who had seen violent behaviour in the film clip were violent with Bobo doll; as opposed to other kids, who had not seen the film clip. This proves the point that children's behaviour largely depends on the culture surrounding them. This research raises the question on the impact of violent movies, television programmes and video games on children.

Psychologists Craig Anderson and Karen Dill established the link between video game violence and aggressive behaviour. Through the experiment, they proved students who played a violent video game behaved more aggressively than those who had not played violent games.

Later on, the American Psychological Association concluded that exposure to violent interactive video games increased aggressive thoughts, feelings, and behaviours.

All these researches prove the fact that observational learning is prevalent in children.

We Indians are fond of cricket; hence, let me take you through the example of cricket.

1.4 Being Observant, You Will Enjoy More

It was March 16 2012, Sachin Tendulkar was batting, and Dale Steyn was bowling. The third ball of the seventh over, Dale Steyn bowled, and Sachin Tendulkar played beautiful cover drive. The whole stadium erupted with joy; those who were watching the match on TV sets also started clapping. Millions watched the shot and enjoyed it.

Only a few people observed the entire proceeding. For them, it was like Dale Steyn bowled over pitch in-swing ball, just outside the off-stump, Sachin Tendulkar read the ball before the ball landed on the pitch, and took out his left foot, reached the ball, and punched it with great timing; keeping the face of the bat closed, so that shot remain grounded, and piercing the fielder standing at mid-off and covers. Sachin's toe was in the direction of the shot, which he played.

The next day, those who had observed *how* Sachin played the cover drive shot were able to perform a similar cover drive (they were able to imitate because they had observed and learnt). At the same time, those who just watched Sachin's shot, blamed the pitch for not being able to play a similar cover drive, themselves.

Thus, those who observed closely, learnt much more than others, who just watched.

Observation helps us learn faster and better. It is a painful and time-consuming process, but is a sure shot recipe of winning. You will enjoy this more if you know the proceedings well; observation is the best way to understand them.

Now the question arises, why some of us are more observant than others? It largely depends on the natural flair of curiosity. Let us understand this in

detail.

1.5 How Does Curiosity and Observation Help in the Decision-making Process?

Curiosity means a strong desire to know or learn about something. A curious observation is a first and essential step in the decision-making process.

A curious person does not accept anything easily. He always has scepticism towards everything, which he sees and hears. The curious people always ask questions, i.e., try to challenge the status quo, and search for their answer.

Being curious can help you know more, and in making proper decisions. This can give you an edge over others.

When you are curious, you identify the situations in which decisions have to be made on the spot or in the future. The curiosity generally stimulates other processes, that help you in decision-making like—questioning, comparing, inquiring about things, experimentation, visualisation, scepticism, categorisation, identification of different patterns, imaginative thought, evaluation, logical reasoning, prediction, inference, etc. All these processes will lead you towards suitable decisions.

Observation helps in the ability to notice important things to gather information. No doubt, if you are observant, then you can become a good decision-maker.

With curious observation, you can make your decision process easy, and effective. During the decision-making process, do not stop your thinking process and think about the problem repeatedly. Think and visualise the whole scenario in your mind, to predict the outcome of your decision.

Curiosity during the decision-making process leads to dissatisfaction i.e., you do not get content with the decision, and in the end, dissatisfaction leads towards improvement in decision-making abilities. Therefore, the more curious we are, the more we will observe, and thus, our decision-making ability would be better.

Good observation skill helps in overcoming statistical bias. Let's understand this through an example of the mythological world.

1.6 Observation is Above Statistics

As per Hindu mythology, Narad Muni is one of the most prominent devotees of Lord Vishnu. He used to chant "Nayaran Narayan", the other name of Lord Vishnu, with every breath.

One day, he went to Lord Vishnu and asked, "My Lord, who is your biggest devotee?" Narad Muni was quite sure that Lord Vishnu would take his name. Lord Vishnu said, "My biggest devotee is a poor farmer on Earth." Narad Muni was quite surprised and disturbed. He immediately decided to go and see this farmer. He had divine power, which he used to become invisible; reach near that farmer, and noticed that the farmer chanted, "Nayaran Narayan", only twice in 24 hours. The farmer was occupied in agriculture, feeding cows and buffalos, cutting wood for cooking food, etc.

Narad Muni went back to Lord Vishnu and said, "My Lord, there seems to be an error in your judgement, the farmer chanted "Nayaran Narayan" only twice, while I chant almost 1,000 times in a day; therefore, statistically, I should be the winner, so please let me know, how this farmer can be your biggest devotee?" Lord Vishnu smiled and told him that all the queries would be answered, but he has to do a critical task for him before that. Narad Muni said, "My Lord, I am always in your duty; please let me know what I need to do?"

Lord Vishnu gave Narad Muni a small *diya* (lamp), which was lit. Lord Vishnu said, "O dear, you have to go around the Earth, and come back within 24 hours, just keep in mind that the diya must not get off." Narad Muni had the divine power of flying; hence, he was very confident that he would successfully perform the task. As soon as he left the place with the diya, he realised that it's not so easy to keep it lit, as the wind was a threat to blowing it off. He somehow, covered the diya, and suddenly a storm came, Narad Muni had an uphill task to keep the lamp lit, and somehow, he crossed that area. He was feeling tired and thirsty, but he was worried that if he stops, he might not reach Lord Vishnu within 24 hours; hence, he continued to fly. Next, there

was heavy rain. Again, he was in deep problem; with a lot of effort, he managed to cross that area also. Finally, with great effort and pain, he reached to Lord Vishnu's abode and claimed that he managed to complete the task successfully, within 24 hours. Lord Vishnu said, "Indeed, you have completed the task within 24 hours, and ensured that diya is lit, so no doubt you are successful in your task; but now tell me how many times you have chanted 'Nayaran Narayan' in last 24 hours?" Narad Muni realised that not even a single time, he chanted "Nayaran Narayan" in the task period. Narad Muni said, "O Lord, I was so busy performing the task that I missed out chanting your name."

Lord Vishnu said, "Dear Narad, imagine the poor farmer is also performing the task which is equally difficult, still, he is managing to chant my name twice a day, now tell me, isn't he is my biggest devotee?" Narad Muni humbly accepted this fact.

The moral of the story is, if you go by pure statistics, you can commit mistakes. You have to observe all the facts around the statistics, to reach a correct conclusion.

Does observation help in our studies? Let's understand it from the story below.

1.7 Observation and Study

Louis Agassiz, the famous Swiss biologist cum professor, at Harvard, had a unique way of teaching. He was master of in-depth comparison and holds a distinguished position in the studies of life science and zoological education.

Once, he placed a fish specimen on the table in front of one of his post-graduate students and asked him to find out more about the fish, without causing any harm. Louis Agassiz then left the class for some other reason.

The student watched the fish for some time and casually wrote for almost an hour, until he felt confident that he knew all there was to know about that fish.

The student got frustrated that his professor had not turned up that day, and similarly, the professor didn't come for the next few days. Eventually, the student realised Agassiz's plan: the professor wanted him to observe the fish more deeply.

After few days of study, the student finally began to notice finer details, that had escaped his vision previously like—how the scales of the fish were shaped and the patterns they made; how the colour of fish differs on different parts; the placement of the teeth, shape of each tooth and so on. When his professor finally returned, and the student explained all that he had learnt, Agassiz replied, "I am not happy with the findings," and walked out of the room.

The student got disappointed, that the professor had discarded all his efforts, but he gathered the courage to further try. He sidelined all his previous notes to start afresh. He studied the fish for many hours per day for an entire week. When he met with the professor the next time, the student had produced work, which was a milestone in studying that species of fish.

After his investigation of the sunfish, the student wrote, "I had learnt the art of comparing objects based on a naturalist's work."

Professor Agassiz is fondly remembered as the best professor, after Greek philosopher Socrates, as his legacy continued with his students becoming famous professors and distinguished scholars.

Do you know, observation skill has helped many discoveries? Let's find them out.

1.8 Role of Observation in Scientific Discovery

"To acquire knowledge, one must study;

But to acquire wisdom, one must observe."

– Marilyn vos Savant.

Invariably every scientific investigation begins with an observation.

In his famous book, *A Brief History of Time*, Stephen Hawking noted, "*good scientific theories must be built on a large class of observations*."

Observations are the basis of scientific theories.

Creativity usually begins by observing the situation and paying close attention to how problems and challenges are being solved. In the case of product innovation, existing systems, products, or natural occurrences can be applied to a new challenge.

1.9 How Did Edward Jenner Invent the Smallpox Vaccine?

In the middle of the 18th century, smallpox was a deadly disease of humans. It killed about one-third of those infected. Survivors often bore scars on their faces and other parts of the body. It was a leading cause of blindness back then. Thus, it was a big challenge for physicians, and scientists to find the solution to this deadly disease.

British physician, Edward Jenner, was born in 1749. Jenner proved that that infection with cowpox could protect a person from smallpox infection. Cowpox was a cattle disease, which used to transfer to humans, but it was not so deadly and harmful.

While Jenner was talking to his milkmaid, she claimed that she would never have smallpox, because she has had cowpox. Similarly, he observed that many other dairy workers also believed that cowpox infection protected them from smallpox.

Jenner was astonished to know this kind of belief in dairy workers, and decided to deep dive into this belief, and thus, decided to experiment with the son of his gardener. He scratched something from a cowpox sore, on a milkmaid's hand into the arm of an eight-year-old boy, Phipps. The boy got ill, but was fine after a few days, i.e. recovered from cowpox.

After a few weeks, Jenner took out some matter from a fresh human smallpox sore, and put on Phipps's arm, with the idea to make him ill with smallpox. Phipps, however, did not contract smallpox. Jenner replicated the same experiments with other humans and published his findings in a leading journal.

Jenner got success in creating a vaccine against smallpox, which helped eradicate this disease from the world. Thanks to the mass vaccination programme globally, the World Health Organisation eventually declared smallpox eradicated from the planet in 1980.

1.10 Benjamin Franklin and his Observations

In the mid- 18th century, most people believed that wet clothing, and dampness in the air, caused the common cold. However, Benjamin Franklin observed that sailors, who were continually wearing wet clothing, were not suffering from cold; thus, something was wrong in their belief about the common cold.

After analysing for some time, he eventually concluded that people often catch a cold from one another, when sitting near, and breathing in each other's transpiration. Before the knowledge of viruses and germs, Franklin had figured out that the common cold, passed between people through the air.

Therefore, by observing wet sailors, he convinced the world that something is transmitting between people, causing the common cold. It was a big revelation, and this led to microbiology research and medicine of cold.

Benjamin's Role in Electricity:

People were aware of electricity in the mid-18th century, but not how we know about it today. Back then, people used electricity for magic tricks, by creating sparks and shocks to amaze people. Scientists were experimenting for centuries, but could not get much success; hence, there was no practical use of electricity.

Benjamin, a curious and inventive thinker, studied electricity in detail and came up with his hypothesis.

Franklin observed several similarities between electricity and lightning as they both—created light, made a loud noise when they exploded, were attracted to metal, had a particular smell, etc. Thus, Franklin got the idea, that electricity and lightning were the same thing. Franklin wrote his thoughts on

electricity, in several letters to his scientist friends, who lived in London. His scientist friends found Benjamin's observation very interesting, so in 1751, they published them in a book titled, *Experiments and Observations on Electricity.*

Benjamin decided to prove that electricity and lightning were the same. Franklin desperately needed something to get close enough to the clouds to attract lightning.

His plan required something tall, like a hill or a tall building; but in Philadelphia, the US, they had neither a mountain nor a tall building.

He came up with an idea; this one involved a key and a kite.

Thus, instead of getting himself up near the lightning, he flew a kite up to it with a metal key attached to it, to attract the lightning, and it worked.

Franklin proved with this experiment that lightning and electricity were the same thing.

However, even after successfully proving his hypothesis about electricity, he didn't stop. He firmly believed that the knowledge about electricity must be used for practical purposes that should help the humankind. Still, the larger question was – what could have been the practical use of the knowledge of electricity?

Fire in the tall buildings, caused by lightning was common in those days. Franklin decided to do something. Franklin knew that lightning usually hit the highest part of a building, and electrical current in lightning could start a fire. Therefore, he invented the lightning rod. It was made of metal and attached to the highest point on the house. The lightning hit the rod, instead of the house, and the electrical current from the lightning went into the ground without damaging the house.

Do you know this invention has saved thousands of lives?

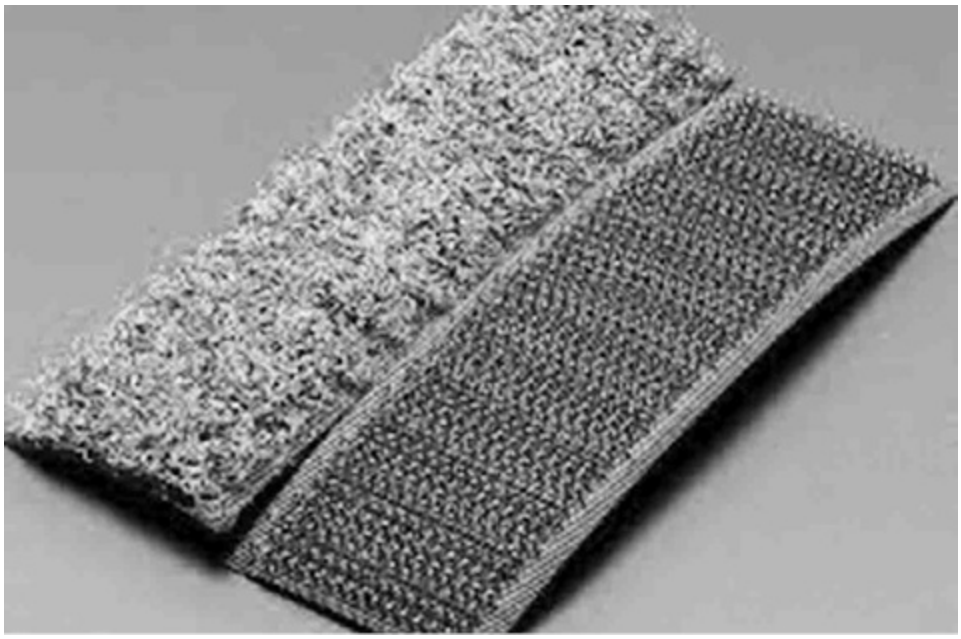
Thus, with the help of observational skill, Benjamin contributed to humanity.

1.11 Velcro's Jungle Connection

One day, Georges de Mestral, a Swiss engineer, was trekking in the jungle along with his dog and observed that burdock burrs (a kind of seed), was stuck to his clothing, and even his dog's fur. He tried to remove them, but it was not so easy. He examined the burrs in the microscope and realised that it's the hook-like structure that tangles with cloth or fur. He wondered whether the burrs could be made into something useful. He was so convinced with his idea of creating synthetic burrs, that he continued his efforts for more than a decade, and finally, he got success and called his invention *Velcro*, and patented it in 1955. We use Velcro in our bags, shoes, etc.

I hope you agree that this is a perfect example of curious observation.

If you do not know what Velcro is, please refer to the picture below:



1.12 Alexander Fleming, and his Anti-bacterial Medicine

Tuberculosis and Pneumonia are bacterial diseases. Both of these deadly diseases killed millions of humans, and there was no treatment in the early 20th century.

Many scientists were working on finding a solution to these bacterial diseases. Alexander Fleming was one of them, but he was in the middle of an experiment when he had to leave for some urgent work. After many days of

absence from his lab, when he returned, he found it messy and began to clean some of the glass plates on which he had been growing a certain kind of bacteria. While cleaning, suddenly, he observed an odd thing: one of the plates had become contaminated by mould. Surprisingly, the area around the mould looked free of bacteria. Fleming's observation indicated that a causal relationship might exist between mould or something produced by the mould, which might prevent bacterial growth. This rather small observation of Fleming's led to a series of scientific tests that resulted in new knowledge, and finally, Penicillin was invented to treat bacterial infections. Penicillin helped cure the deadly tuberculosis, and pneumonia; thus, millions of lives have been saved.

I hope you agree, that if creativity can be inspired by observing the environment, and the situations we experience daily; the possibilities are infinite. Creativity can come at any moment in virtually any form. Having an open mind can lead to immense outcomes. In companies, the marketers, product developers, salespeople, and CEOs often observe and think about how observation can relate to their product or service. Allow yourself to dream, imagine, and create. Organisations, which are dedicated to challenging the status quo, and continuously seeking creative solutions, are often the winners in today's fast-paced market.

Now the question arises, why have I termed observation as an ignored skill? You might have noticed the importance of observation while going through the various anecdotes mentioned in this chapter. Tell me honestly, how many times have you tried, to develop this skill?

Not much of discussion happens on this topic, not many educational courses are being offered, and not many books have been written on observation skills. The simple reason behind this phenomenon is something that is very common, which is usually ignored.

Now I hope you will try your best, to develop observation skills through concentration, and curiosity.

The next chapter is about your ability to connect various independent events, to understand its implications.

CHAPTER 2
POWER OF CONNECTING THE DOTS

"You can't connect the dots looking forward; you can only connect them looking backwards."

– Steve Jobs

Connecting the dots means to put various facts and ideas together to see the whole picture. It can help us understand the historical perspective in the true sense, and why things are happening.

Our ability to connect dots gives great insights. The knowledge we possess is the most significant enabler of developing our skill of connecting the dots. Things are related to each other, our action and thought process result from prior experience, and will be based on future consequences. The incidental result of various past factors will impact future events; therefore, our skill in connecting the dots will help us plan our activities better.

If you develop this skill, it will help you make informed decisions, which will have long-term implications.

In this chapter, I will try to help you understand the beauty of connecting the dots, through various examples.

2.1 Bombay Dreams and its Suez Connection

Mumbai, or erstwhile, Bombay wasn't always this vibrant, developed albeit a business hub in India.

If one looks at Bombay's story, you will see so many dots, and when you connect them, you get the story behind the Bombay's success.

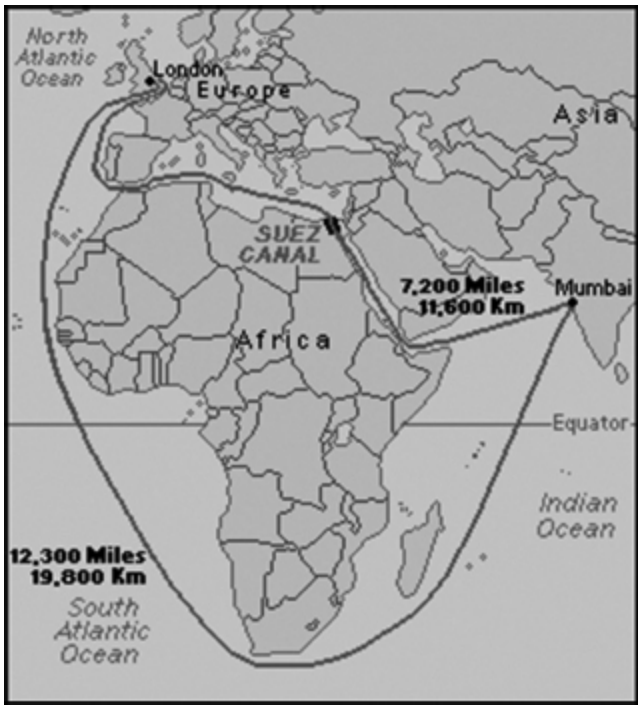
In 1534, Ruler of Gujarat, Bahadur Shah, ceded Mumbai to Portuguese. At that point of time, Mumbai was nothing but sleeping coastal village of seven islands. For the next 127 years, Mumbai was under Portuguese rule, until 1661, when English Prince Charles II, married Portuguese princess Catherine of Braganza.

As a gift, Prince Charles II received Mumbai, a small port town with a population of little over 10,000 people.

At the same time, competition in trade was rising with the arrival of British East India Company, with their first major trading hub established in Surat, in 1612.

This era also saw the conflict between resurgent Maratha power and Mughals. Due to continuous skirmishes between two forces, East India Company was desperately looking for an alternate trading hub and headquarters.

Seizing the opportunity, in 1668, British East India Company took Mumbai from the crown and developed Bombay as their trading hub. This was the start of Bombay's story.



By 1675, the population of Mumbai had grown to 60,000 people, and the port city was witnessing ever-increasing growth in business, and prosperity; but one event was to happen, which would change the course of history for Bombay, was the opening of Suez Canal.

Suez Canal, a narrow passage connecting the Mediterranean Sea to the Red Sea, opened on November 17, 1869. This small canal, of little less than 200 kms, changed the fate of Bombay.

Due to this canal, the distance between London and Mumbai was reduced by about 40 per cent. Also, because of the Suez Canal, cargo ships were now passing through the Arabian Sea, while going to the eastern part of Asia; this also made Bombay a significant port. Soon Bombay's sea trading business soared. Due to higher cotton export, cotton mills started mushrooming in Bombay.

They say success brings success, and it was right in the case of Mumbai. Export hub made Mumbai, a financial hub, and it emerged as the financial capital of India.

Thus, Mumbai's story has a few dots connecting back to the Suez Canal, and its transfer to the British crown.

2.2 How the US Government's Policy Killed Indian Cotton Farmers

With Mumbai becoming the hub of cotton mills, by the early 20th century, demand for raw material soared. Farmers in Maharashtra, Gujarat, and Madhya Pradesh grabbed the opportunity. Cotton became the 'cash crop', giving profitable earning to farmers.

Fast forward to the 21st century, global competition makes one wonder, how a decision taken thousands of kilometres away, hits someone sitting in a remote village in India.

To grow cotton, most of the farmers depend on credit for their financial needs. The repayment of loan depends on the crop, and for over a century, the

supply-demand gap had ensured balance skewed towards Indian cotton farmers.

By the sixties, Indian cotton supremacy was challenged, and overtaken by the US, as it became the largest cotton producer. With China coming to the second position, and India at the distant third; the US was not happy with its business interest's continuous challenge.

US farmers informed their Government officials that it's getting challenging to export cotton at a lesser price than India, and China; hence, they won't be able to export cotton.

To defeat China and India on the pricing turf, the US Government announced heavily subsidised cultivation and cotton exports for its farmers. This action flooded the market with cheaper cotton from the US, and the cotton price dropped across the world, damaging the Indian and Chinese cotton industry's earnings.

In India, this resulted in a slow-down in the cotton industry, which forced factories to shut operations in Mumbai, Surat, and other parts of India. Thousands lost their jobs, and inadvertently, millions suffered in the hinterland of the country.

Low income, uncertain future led to suicides, and farmers, mass exodus towards towns searching for menial jobs.

Thus, a decision made 12,000 kms away from India, led to the suicide of thousands of Indian cotton farmers.

However, since 2019, India has again become the largest cotton producer with China trailing in the second position. However, the cotton market is still uncertain, and now, instead of the US Government in charge, the market is mainly dependent on private players in the agricultural industry.

We are on the subject of farming; hence, let me share another incident related to farming in India.

2.3 Indian Green Revolution and Connection with the Vietnam War

India gained its independence in 1947, and as expected, the British had drained India, leaving behind an economy in tatters, industries in shambles, and Indian populace at the mercy of heaven.

Indian food grain production was not enough to feed its population of 360 million. On the contrary, the United States was producing much more wheat, than its consumption. US enacted a law, *PL480*, under which the US was giving free wheat to countries in distress. Obviously, it was part of their diplomacy, but it was still a noble gesture.

Upon request from the Indian Government, the US agreed to give them free wheat. This programme was called, 'ship to mouth.'

As India was getting free wheat, there was lethargy amongst Indian politicians, and as well as bureaucracy. No real efforts were made to increase food grain production in India. However, things changed when the US went into war with Vietnam.

India morally supported Vietnam in war, which irked the US President, Lyndon B. Johnson. He decided to reduce the supply of wheat to India, to teach India a lesson.

India's situation became so grim, that the then Indian Prime Minister, Mr. Lal Bahadur Shastri, had to request their citizens to fast one day every week. After a lot of persuasions, the US resumed supply of wheat to India. This episode was enough for the Indian Government to open their eyes, and focus on increasing farm productivity.

The Indian Government deputed the best agricultural scientists to work out a solution, and help was sought from Mexico, which had seen an agricultural revolution.

With the continuous focus of the subject, within five years, by 1971, India achieved self-reliance in food grain production, and the import of US wheat under PL480 stopped.

Today, India stands tall in the global food supply chain, and features as a top grower of agricultural products in the reports of FAOSTAT (Food and Agriculture Organisation of the United Nations).

2.4 Canada's Connection with Uttar Pradesh and Bihar

You might be wondering as to what people of UP and Bihar, have to do with Canada; and the same way what people of northeast India, have to do with the Middle East. Yes, you are right. Actively, there is no correlation, but passively yes.

Let me explain.

In the mid-fifties, many Punjabis migrated to Canada, thus leaving a vacuum in their backyard for workforce. This was due to the shortage of workforce, i.e., agricultural labourers and, therefore, labourers from Uttar Pradesh and Bihar migrated to Punjab searching for greener pastures. In those days, labourers' conditions used to be very bad in Uttar Pradesh and Bihar; thus, migration to Punjab helped them live a better life, and these migrant labourers started sending money back to their villages.

Thus, indirectly, Punjabis living their Canadian dream created an opportunity for people of Uttar Pradesh and Bihar.

In the same manner, once the oil economy boomed in the Middle East, for construction, and other labour-intensive jobs, Keralites moved there. This movement left Kerala, with a workforce shortage. Northeast Indians filled the gap in Kerala's workforce; as there weren't many job opportunities in their homeland. Thus, the economic boom, in the Middle East, helped the Northeast of India, indirectly.

The purpose of this example is to tell you that the implication of anything is widespread; our actions could affect many more and even the ones who are not on our radar.

The Government and its policies play a significant role in our life. Let's go through an example, in which, I have tried to put forward Government policy mistakes.

2.5 How Government Policies Can Affect the Economy of States

Industries need raw material to manufacture goods. Heavy industries are the one which acts as an enabler for the small enterprises. Iron and steel industries are an example of heavy industry; the finished products are used in small industries to make household things. Thus, heavy industries are popularly called, mother industries.

Most of the heavy industries need minerals. India is a mineral-rich country, however, deposits are confined to limited states of Orissa, Jharkhand, Bihar, Madhya Pradesh, etc. In an ideal world, states with rich deposits should get the benefit of their mineral-rich soil.

When India got independence, there was a demand that there should be equal opportunity to all the states to produce goods. In principle, it was a good idea, as it looked like it provided an equal opportunity for all.

Freight Equalisation Policy, 1952, was adopted by the Government of India, to facilitate the balanced growth of the industry across the country. This meant a factory could be set up anywhere in India, and the Central Government would subsidise mineral's transportation.

Most of the mineral deposits were in Bihar, Orrisa, and Madhya Pradesh; therefore, ideally, the industry would be benefited, if it sets up a manufacturing unit near the source of raw material, as it will reduce the logistical needs, and the cost attached to it. However, due to the Freight Equalisation Policy, the transportation cost was taken out of the equation, resulting in industrialists putting up factories in Gujarat, Maharashtra, and Tamil Nadu.

These states had an added advantage over mineral-rich states in the form of sea-coast, which was used for export and import; thus, Government took away advantage from mineral-rich states, in the name of equal opportunity. This diabolic policy introduced, remained in force until 1993 when the Government scrapped this policy, but it drained every possibility of bringing prosperity to the nation's mineral-rich area.

After-effects of this policy can still be seen in the poor, and undeveloped states of Jharkhand, Orissa, and Madhya Pradesh.

Sometimes, a solution, which seems to be working, becomes part of the problem. Let me share a story.

2.6 The Snake Effect

The snake effect occurs when an attempted solution to a problem makes the problem worse. This term originated as an anecdote.

The story goes back to an incident in British India. Unfortunately, there were too many venomous cobra snakes in Delhi. People were dying due to snakebites, and it became scary for almost everyone to step out of their houses. The, then Governor, had to get into action to stop this menace and offered money for every dead snake. He thought, once all snakes are killed, the problem would be solved.

The results of the reward programme were great; a large number of snakes were killed for the reward. The Governor thought that his idea has worked.

Eventually, however, it led to some severe unwanted consequences. After a short-term dip in the snake population, surprisingly, it started going up.

This happened because few people began to breed snakes for income. When the news reached the Governor, the reward programme stopped; resulting in the snake breeders to set the now-worthless snakes free. As a result, the snake population further increased. The simple solution to a problem made the situation even worse.

A similar type of incident like the increasing snake population happened in Vietnam, which was a French colony then. The administration realised that there were too many rats in Hanoi, and unfortunately, the spread of plague was imminent, therefore, they created a reward programme that paid a prize for each rat killed. To obtain the reward, people needed to provide the severed rat tail. As expected, after initial success, people, however, started noticing rats with no tails. This happened because the rat catchers would capture rats, cut off their tails, and then release them back into the sewers to breed and produce more rats, thereby increasing the rat catcher's profits. Obviously, the reward program was called off.

The unintended consequence of a well-intentioned idea sometimes makes the problem worse.

Let me share another example of an idea going wrong.

2.7 How A Logical Decision Proved to be Wrong

During 1957-58, millions of Chinese people died because of hunger. The food grain production was inadequate for a population of 635 million.

Back then, the Chinese believed that birds and rodents eat some food grain; hence, if these birds and rodents were killed, it will lead to additional food grain. Therefore, the then President of China, Mao Tse Tung, commanded Chinese people all over the country, to come out of their houses to bang pots or utensils and make the sparrows fly continuously, with an idea of sparrow dying out of exhaustion, which, in March of 1958, people did.

Sparrows also were caught in nets, poisoned, and killed. By some estimates, a billion birds died, and there was a widespread belief, that shooting birds would bring prosperity.

However, ecology does not work this way.

When the sparrows were killed, crop production and food grain availability indeed increased, but with time, something else happened, which was much more unexpected. Pests of rice and other crop erupted in a magnitude never seen before, and as a result, crops failed, i.e. deficient food grain production. Starvation due to shortage of food grain led to the death of an estimated 35 million Chinese people.

Chinese ornithologist (those who study birds), had found that, while adult tree sparrows mostly eat food grains and fruits, their babies, like those of common house sparrows tend to eat insects. By killing the sparrows, Mao, and the Chinese had saved the crops from sparrows, and as a result, insects got a free run, in the absence of any predator.

Finally, Mao, in 1960, ordered sparrows to be conserved. This proves the fact, that we value something only in the absence of that thing.

The beauty of ecology lies in the fact that everything plays a role in our life.

During school days, you might have come across a dilemma about how mathematics helps in real life—algebra, geometry, trigonometry, calculus, statistic, permutation and combination gave nightmare to many.

Let me share an exciting story involving war, and a mathematician.

2.8 How a Mathematician Helped Allied Forces to Win the Second World War

During World War II, Germany had an edge because of its naval strength. German U-boats unleashed terror throughout Europe, but US shores were also well within the German submarine's attack range. Do you know, during the first three months of 1942, German U-boats sank more than 100 ships off North America's east coast, in the Gulf of Mexico, and the Caribbean Sea? Many of those ships were within the sight of land.

In war, communication plays a very important role in the armed forces. German forces were using the Enigma machine to send wireless communication internally. The Enigma machine was developed in Germany shortly after World War I, was used to encode and decode messages. For the next two decades, the German military refined the technology, until it became the Nazi's primary means of secret communication, during World War II. Enigma technology continuously altered throughout the war, making the challenge of breaking German cyphers extremely difficult.

British forces wanted to break the code, to know the internal communication of German troops; hence, the British army gave this responsibility to Alan Turing, a mathematician. He made a range of code-breaking machines for cracking German cyphers, which included an electromagnetic device, called the Bombe, which countered the German Enigma machine.

Though it's not possible to quantify the exact impact of Turing's contributions through breaking the code, some military historians estimate that the World War would have been continued for at least another couple of

years, and two million more lives would have been lost, if Alan Turing and his team hadn't cracked the way to decode German communication.

Without Turing and his team members' efforts, the allies would have continued to face a severe disadvantage, against the German forces.

Shortly after World War II, Alan Turing was awarded Order of the British Empire for his work.

Do you know Alan Turing, is known as the father of the computer, and also the father of today's artificial intelligence?

Alan Turing is considered to be the father of modern computer science. He formed the concept of the algorithms, and computations with one of his inventions called the Turing machine.

Turing had moved to London, in the mid-forties, and began working for the National Physical Laboratory. Turing was instrumental in design work for the Automatic Computing Engine, and ultimately created a groundbreaking blueprint for store-programme computers. Later on, his concept has been used as a model, by tech corporations worldwide for several years, influencing the English Electric DEUCE design, and the American Bendix G-15—credited by many in the technology industry, as the world's first personal computer.

Nowadays, artificial intelligence is a buzzword, but do you know that Turing, played an important role in bringing artificial intelligence to our lives? Turing wrote a paper in journal in 1950, with the headline of "*Computing machinery and intelligence*", and proposed an experiment known as the "Turing Test"—with an effort to create an intelligence design standard for the technology industry. In the last several decades, the test has significantly contributed to the field of artificial intelligence.

By the way, the British Armed forces have played a role in your life. Don't know? OK, let me help you with another anecdote.

2.9 Cell Phones and British Armed Forces

It will not be wrong to say that mobile phones have become an integral part of our lives. Research shows that we spend more than four hours every day using a mobile phone.

In the late '60s, the British Ministry of Defence decided, it wanted flat-screens to replace bulky and expensive cathode ray tubes (like old days black and white television), in its military vehicles. Scientists suggested liquid crystal displays (LCDs); the problem was that they only really worked at high temperatures. So, even they knew that the solution was not feasible. British Ministry of Defence requested George Gray, at the University of Hull, to work out ways to make LCDs function in room temperature. After a lot of effort, he succeeded by inventing a molecule, known as 5CB. This molecule helped LCD to work in room temperature. By the late-seventies and early-eighties, almost 90 per cent of the world's LCD devices contained 5CB. Later on, the same technology was replicated in cell phone screens. This molecule is still in use in some cheap watches and calculators. Thus, George Grey has contributed to our most used device i.e., smartphone.

Therefore, there is a story behind every success. If we know the genesis of success, it is easier to learn and use that learning in real life. It's not easy to connect the dots, because it is impossible to understand the story, or simply enjoy it without knowing facts and the complete story. This skill can help you to get an edge over others, and excel in life.

So, what is required to develop this skill?

The answer is again curiosity, more comprehensive knowledge, and a little bit common sense.

In the next chapter, we will go through the importance of communication. Just keep in mind that no communication is also a form of communication. Confused? Do not worry; let me make it easy.

If your girlfriend or wife is not talking to you, or not picking your call, isn't she communicating something?

CHAPTER 3

POWER OF COMMUNICATION

"A man's character may be learned from the adjectives which he habitually uses in conversation."

– Mark Twain.

Communication is fundamental for the existence, and survival of humans. It is a process of creating and sharing ideas, information, facts, views, feelings, etc. among the people, to reach a common understanding.

It is communication, which leaders have used to motivate and align people.

There are broadly two types of communication; verbal and non-verbal. Verbal communication is the use of words to share information with other people. It can include both spoken and written communication. At the same time, non-verbal signals, are word-less communication like body postures, facial expressions, hand movements, gestures, eye contact, attitude, and tone of the voice.

According to you, which type of communication do we use more, verbal or non-verbal? If your answer is verbal, I am sorry, you are wrong.

According to research on interpersonal communication, 93 per cent of communication is non-verbal.

One another study shows that the reason for 90 per cent of fights was not what someone said, but in what tone something was said. This shows the importance of communication. Indeed, words are powerful, but the tone in which the words are spoken is often more powerful. Sometimes, not-so-soothing words, said in a cheerful tone or light tone have a different impact upon the person, while the best of pleasant words, remains ineffective. The

power of tone is no doubt, a key factor behind the success of an individual. Words are often used as a mode of communication, but the real weapon is the tone, cementing, or ending a relationship. You know the pen is mightier than the sword; similarly, it may be said that tone is mightier than words.

Your use of non-verbal signals will help you make friends, connect with others well, express what's in your mind, and build better relationships at home and office.

In an earlier chapter, I asked, "Imagine a grown adult, lest a child, to fight with a two-year-old lion, whom do you think is more likely to win?" The answer is two years old lion. This is enough to prove, how difficult it would have been for humans, to survive among animals almost 2.5 million years ago.

Therefore, if humans are so weak in comparison to animals; then how come, they survived and thrived?

Some pundits would answer that the human's ability to light a fire has given an edge over other animals. Indeed, that would have helped immensely, but there is something more important, which helped humans, to my mind; humans are the only species that can transfer knowledge between generations. That is why, every generation is wiser than the previous generation, and as a result, humans have been accumulating knowledge.

Learning is the most important thing. Animals learn by their trial and error, but humans learn maximum from others' experiences. You know about neutron and proton, gravity on the moon, chemical combination of water, treatment of disease, power and torque of your car, etc. I hope you will agree with me that neither of these things were invented nor derived from you. It was someone else who did all experiments, which you learnt and acquired the knowledge from.

Initially, homo sapiens might have used only body language to communicate, then the verbal method might have come, and after that, some written signal would have been preceded with alphabets. Therefore, initially, it was mostly face-to-face communication, but later on, with a book's help, face-to-face

communication was no more required, and now with the internet, the communication or knowledge transfer has reached a new height.

Therefore, if you observe, the ability to transmit knowledge helped humans to conquer the world.

Even today, those who are learned are respected more, because their ability to contribute to society is more. Historical perspective tells us that communication has been critical in humans' thriving.

Carnegie Institute of Technology did many years of research, and concluded, "*85 percent of your financial success is due to your personality and ability to communicate, negotiate, and lead. Shockingly, only 15 percent, due to the technical knowledge you have*."

Indra Nooyi, ex-chairman and CEO of PepsiCo, says, "You can't over-invest in communication."

You will be surprised to know, that British Prime Minister, Mrs. Margret Thatcher, hired a National Theatre tutor, to improve her communication.

Are you using your communication skill effectively? If not, please work on it. What is most important in communication is your content, tone, and body language.

Steve Jobs is known as one of the most prominent innovators, as well as communicators. In the year 2001, MP3 players were famous. Steve Jobs had to announce the launch of a new iPod, i.e., the competitor of an MP3 player. During the pre-launch rehearsal, Steve Job's technical team informed that Apple's just 1.8-inch device has 5 GB data, and that's the biggest USP of product. Steve Jobs thought from the customer's angle and declared in the launch event, that he is proud to launch the iPod, which means 1,000 songs in the customer's pockets. You will agree that for customers, the 1,000 song narrative is more attractive than the 5 GB data narrative. Therefore, Steve Jobs made an impact on the new product through his customer-centric communication.

Effective communication has the ability to solve a complex problem. Let's find out how the British Prime Minister, Winston Churchill, used his communication skill to persuade his fellow citizens to fight against Germans.

3.1 How Winston Churchill Changed the Course of World War II with the Help of His Speech

World War II started on September 1, 1939. With the help of Italy, Germany defeated France on July 24, 1940.

Germany had defeated France, Belgium, and Netherland. The next target of Germany was Britain. There was widespread fear in Britain about the war.

Lord Halifax, the foreign secretary of Britain, had a difference of opinion with the then Prime Minister, Churchill, as he requested Churchill, to negotiate peace terms with Hitler. Lord Halifax informed that Italy is ready to become a mediator. Churchill was not at all in favour of bowing down against Hitler. He was determined to fight with German forces, but for that, he had to convince the British parliament, which was an uphill task. The British parliament was in favour of the referendum of citizens (to decide about fighting Germans or not). Churchill knew that it was a long process, and the outcome could be anything. He decided to burn the midnight oil and finally prepared a passionate speech, and delivered it in the parliament. Through this speech, he managed to convince the parliament to fight against Germany.

The excerpt of the speech is:

We shall go on to the end. We shall fight in France, we shall fight on the seas and oceans, we shall fight with growing confidence and growing strength in the air, and we shall defend our island, whatever the cost may be. We shall fight on the beaches; we shall fight on the landing grounds, we shall fight in the fields and the streets, we shall fight in the hills; we shall never surrender.

This speech influenced British citizens and inspired them to go to war with full energy, and we know the result.

The United States faced the worst depression in 1929; President Roosevelt played an essential role in their economic recovery. Let's know how he used his

communication skill, to bring the economy back on track.

3.2 How Franklin D. Roosevelt Won the Confidence of US Citizens

The United States was suffering from, the Great Depression during 1929-1933. In this period, the US's GDP fell by a whopping 30 per cent, the stock market fell by 90 per cent, and industrial production fell by 45. It was a terrible time for the US economy.

It was the year 1933, and President Roosevelt decided to address US citizens over the radio. He termed this address as 'fire-side chat.' By that time, every 9 out of 10 US households had the radio. His first speech was about the 'banking crisis.' In the speech, he explained his policy to overcome the banking problem. The policy was the 'new deal.' His address to the nation was so passionate, that people trusted him and gained confidence. Within a few weeks, the economy started rebounding, and finally, the US came out of the Great Depression.

Do you know Roosevelt hosted 30 fire-side chats from 1933 to 1940? He is the only US President to win four consecutive presidential elections.

The secret of this address was that he kept the address informal, and in a conversational tone. Roosevelt used simple language, examples, and analogies in the fire-side chats to easily communicate his policies. He used to start the chats with the greeting "My friends", and referred to himself as "I", and the American citizen as "you", as if he was addressing his listeners directly and personally.

Both above examples show how the world leaders used communication, as their biggest weapon against uncertainty, and instilling confidence in their citizen.

Don't you think, Roosevelt's "fire-side chat", inspired Indian Prime Minister, Narendra Modi, to start *"Man Ki Baat",* which is also primarily radio talk?

Roosevelt even used his communication skill to persuade American Citizens, to support Britain in World War II. Let us know how he did.

3.3 Where There is a Will, There is a Way.

During the Second World War, it was June 1940; Germans had defeated the French and British army in Dunkirk's battle. British were worried about the German winning spree.

World War II had begun on September 1, 1939. Within 10 months, Germany defeated Czechoslovakia, Hungary, Austria, Denmark, the Netherlands, Belgium, Norway, and France. The next target was Great Britain.

As expected, the German air force started bombing London and nearby areas, pushing Britain for quick surrender. German naval sank the British naval ships.

Winston Churchill wrote a desperate 15-page letter, to Franklin D Roosevelt, to support Britain in the World War. There were not many options left with him.

Americans were not keen to join World War II; the reason was a devastating World War I, and they had just come out of the Great Depression. People of America wanted America to stay out of the so-called European war.

The United States had passed the Neutrality Act, which prohibits selling arms to warring nations.

By 1940, Franklin Roosevelt had been President for two terms, and he was about to appear for the presidency for the third term. Historically, no other President held that office had served for more than eight years. He wanted to help Britain, but looking at the majority of American's feeling against the war, didn't reply to the letter of Winston Churchill; fearing backlash by Americans, thus, chances of losing the presidential election.

During the third term presidency campaign, he promised the American people that the country would be kept out of the war.

Few months after winning the presidential election, Franklin Roosevelt was determined to help Britain. He addressed the American people, through one of his radio fire-side chats. It became famous as his "Arsenal of Democracy" speech. He started by saying, *"This is not a fire-side chat on war. It is a talk about*

national security…If Great Britain goes down, the axis powers (Germans), will be in a position to bring enormous military and naval resources against United States."

Knowing that Americans were against getting involved in the war, he focused on the importance of assisting the British, who were doing the fighting and keeping the Nazi threat away from the US shores. Franklin Roosevelt said, *"We are the Arsenal of Democracy. Our national policy is to keep war away from this country."* The implication was that the best way to accomplish what Roosevelt said was to send military aid to the country (Britain), which was keeping the enemy at bay.

In an address, to the Americans in 1939, President Roosevelt assured the nation, that he would do all he could to keep the United States out of the war. Still, at the same time, he said, "When peace has been broken anywhere, the peace of all countries everywhere is in danger".

These speeches convinced Americans, that the best way to avoid future American casualty, is to support Britain with arms and ammunition, so that Germans are defeated, without any loss of American life.

Franklin Roosevelt ended the Neutrality Act and introduced a Lend-Lease Act, through which vast amounts of warships and ammunition were given to Britain, and other countries fighting against Germans, Italians, and Japanese.

Therefore, again it was effective communication, which helped Roosevelt, to convince his fellow citizens.

Now, coming back to the current scenario. What do sales and marketing people do to sell their products? They communicate in a way that convinces consumers to spend money and buy their products. They first identify the need, and then pitch the product according to customer needs, to close the deal in a smoother and faster way.

Do you know just the movie's name, its poster, or the same way, a book cover, can influence your decision to watch the movie or buy the book? It happens because the name, poster, or cover of the book communicates with you. Your experience helps you form a perception and get attracted to it.

Do you know what the most used words in advertisements are? Do you know for the 30 seconds television advertisement content, research and planning are done for months? Every word spoken or shown in an advertisement is analysed by consumer behaviour experts to create maximum impact on targeted consumers. The most used words are: discount, new, now, hurry, more, guaranteed, hassle-free, save, improved, extra, smart, sale, and limited period offer. Sounds familiar? Doesn't it?

In professional life, you might have observed, that there is a significant weightage given to communication skills during the interview assessment process, irrespective of any job profile.

Have you ever asked yourself why companies spend time and money to communicate their vision, mission, and goal of organisation with its employees? It's done to align the employees for a common objective. Research has proved that if employees are aligned, productivity goes up, leading to higher profitability. Thus, communication skills can affect your personal and professional life.

In the next chapter, let's understand the 'Power of purpose'.

CHAPTER 4

POWER OF PURPOSE

"Thoughts lead on to purpose, purpose leads onto actions, actions form habits, habits decide character, and character fixes our destiny."

– Tryon Edwards.

When we get passionate about doing something, there is no pain, no burnout, and no excuses. Ask a scientist who works 20 hours a day. He does not work this hard just to earn money, he has a mission to achieve, i.e. there is a purpose behind his work. It could be an invention of vaccines to eradicate deadly diseases or the invention of affordable medicines for the poor. People normally would work for 8 to 12 hours, that too, with a lot of frustration, I am sure you might have come across such people, who work for the money. They constantly crib about everything in life, it's because they are not attached to their work.

In Japanese, *Ikigai* is called the purpose of life. A study on Japanese found that those who had a strong connection to their sense of purpose live longer than those who didn't.

Renowned author, Dan Buettner, researched Ikigai and wrote in his book, that the two most vulnerable times in a person's life are the first 12 months after birth, and again 12 months following the retirement. You might have heard of instances in the news that perfectly healthy men have died shortly after their retirement. Researchers believe that such men lacked purpose in their lives, which affected their health. A study of retired employees of Shell Oil found that employees who retired early (aged 55) were likely to die earlier than those who retired at age of 65.

This research indicates that during the working career, there might be some purpose driving them. In the absence of purpose, their behaviour and nature changed, which affects not only health but also their relationships.

India's biggest FMCG company, Hindustan Unilever Limited, believes in purposes so much that they have declared three pillars, which are—companies with purpose last, brands with purpose grow, and people with purpose thrive.

As Stephen Covey once said, "*If the ladder is not leaning against the right wall, every step we take just gets us to the wrong place faster*." Therefore, purpose drives human beings, and in the absence of purpose, takes away the zeal and motivation.

4.1 How Did Steve Jobs Convince John Scully to Join Apple?

In 1983, Pepsi was one of the world's leading brands; then, John Scully was the President. John Scully was a highly successful professional. In 1977, at the age of 38 years, he had become President of Pepsi.

John Scully used to get many offers from the world's best companies, but he never thought of leaving Pepsi as he had everything, i.e. prestige, money, and motivation. He was a role model for executives, as he had started working in Pepsi as a trainee, and became President of Pepsi.

At the same time, Apple Inc. was just a startup. Steve Jobs managed the operation, but he was inexperienced; thus, he was looking for someone who can lead Apple. He zeroed down the name of John Scully.

For John Scully, it didn't make sense to join the relatively unknown company, which got founded only seven years back and sells personal computers. There was no guarantee that Apple, as a company, would even exist in the next few years.

Steve Jobs was determined to take John Scully on-board. He thought there were no other means that would help convince John Scully, but, to tell him that his contribution to humankind would be immense if he joins the computer revolution; he simply used the 'purpose' card. During Steve Jobs'

meeting with John Scully, he asked, "*Do you want to sell sugar water for the rest of your life, or do you want to come with me, and change the world*?"

This single question pushed John Scully to decide his future, in the same year, he left Pepsi and joined Apple computers, and the rest is history.

4.2 How Do Organisations Use Purpose to Increase Productivity?

The biggest challenge for any organisation is to motivate their disengaged employees. A disengaged employee is someone who usually does not enjoy work, constantly cribs about working conditions, and does the bare minimum job; such employees spread negativity in their circle and push motivated employees also to disengage. In a simple sentence, they work for the sake of spending mandatory hours in the office.

To solve this sort of problem, organisations share the purpose of the company's existence, i.e. if people know that their work will help someone needy, or there is some noble cause, chances are very high that employees give their 100 per cent.

The organisation's purpose should tell its role in the broader economic, societal, and environmental context, i.e. more than just profit-making.

Some examples of organisational purpose are:

- Merck: "Our purpose is to preserve and improve human life."
- Apple: "To bringing the best user experience to its customers through its innovative hardware, software, and services."
- Southwest Airlines: "We connect people to what's important in their lives."
- Google: "To organise the world's information and make it universally accessible and useful."
- Microsoft: "To empower every person and every organisation on the planet to achieve more."

- Zappos: "Our purpose is to inspire the world by showing it's possible to simultaneously deliver happiness to customers, employees, community, vendors, and shareholders in a long-term sustainable way."

The purpose of an organisation helps employees set long-term direction and business strategy, inspires innovation, increases brand trust and loyalty, and creates customer-centricity.

A research by leading management consulting company, Gallops, proves that organisations with purpose increase productivity, retention rates, attract the best talent, and provide pride and engagement.

Have you ever wondered why millions are mobilised by the appeal of saints and honest politicians? The answer lies in their noble purpose.

You donate blood because there is the purpose of saving an unknown person's life.

In the next chapter, we will know the power of dream, i.e., how your dream has the power to shape your future.

CHAPTER 5

POWER OF DREAMS

"Dream is not that which you see while sleeping; it is something that does not let you sleep."

– Dr. Abdul Kalam.

Dreams of achieving something help in aligning all efforts in that direction. Dreams motivate, inspire, improve, and help you achieve any goal. Dreaming for a significant purpose is essential, and it can even change the course of your entire life.

Henry Ford said, "*Whether you think you can, or you think you can't – you are right.*" Therefore, if you believe in your dream or not, you are right.

Let me share how Martin Luther King Junior inspired people against racism.

5.1 Martin Luther King, Jr. and his Dream

In the fifties and sixties, there was a growing demand for equality in the United States. African-Americans were discriminated based on their skin colour. Martin Luther King, Jr. started civil disobedience to protest against discrimination.

In 1964, he addressed the people of the USA against racism and discrimination; he used the power of a dream to inspire millions of black people.

The excerpt of his famous speech is:

I have a dream, that one day this nation will rise up and live out the true meaning of its creed – we hold these truths to be self-evident: that all men are created equal. I have a dream that one day, on the red hills of Georgia, the sons of former slaves and the sons of former

slave-owners will be able to sit down together at a table of brotherhood. I have a dream that one day, even the state of Mississippi, a desert state, sweltering with the heat of injustice, and oppression, will be transformed into an oasis of freedom and justice. I have a dream, that my four little children, will one day live in a nation where they will not be judged by the color of their skin, but by the content of their character. I have a dream today! I have a dream that one day, down in Alabama, with its vicious racists, with its Governor having his lips dripping with the words of interposition and nullification; one day right there in Alabama little black boys and little black girls will be able to join hands with little white boys and white girls as sisters and brothers.

I have a dream today!

I have a dream, that one day every valley shall be exalted, every hill and mountain shall be made low, the rough places will be made plain, and the crooked places will be made straight, and the glory of the Lord shall be revealed, and all flesh shall see it together.

This speech from Martin Luther King, Jr. is known as one of the excellent speeches in human history.

Steve Jobs is known for his famous saying "Dream bigger", and he preached on it. He conquered the epitome of success, with his big dreams. He perfected a blend of dedication, and hard work to accomplish his dream. The initial dream of providing a computer in every person's hands is what inspired him, and all of Apple.

5.2 Walt Disney and his Dream

Walt Disney had said, "*If you can dream it, you can do it*." He was a dreamer from an early age. Having said that, dreaming alone is not going to help, you also need passion.

Walt Disney did not achieve success easily. He was fired from his job of newspaper editor because, as per his boss, "he lacked imagination and had no good ideas." When he was jobless, Disney formed an animation company, which ultimately went bankrupt. Still, it was his dream of incorporating the best amusement park, that kept pushing him, and finally, he got success.

Have you ever heard about a person, who didn't have a clue concerning what they wanted in their life, yet became highly successful? Of course not. The dream acts as a compass, provides the direction that we should travel towards.

We have plenty of examples of dreamers succeeded despite adverse conditions like Napoleon, who despite having humble parentage, went on to become an emperor. Beethoven composed some of the most celebrated music, even after losing hearing ability. English novelist, Charles Dickens, was born in poverty, and never left his dream of becoming a novelist.

Do you have a dream, which does not allow you to sleep? If yes, you will achieve success in fulfilling that dream.

In the next chapter, we will go through 'Power of out-of-the-box thinking.'

CHAPTER 6

POWER OF OUT-OF-THE-BOX THINKING

"Telephone did not come into existence from the persistent improvement of the postcard."

– Amit Kalantri.

We know the saying "The only thing constant in life is change", i.e., change is inevitable, but we still resist changing. The same stands true for the reluctance to do something differently. The reason for this reluctance is 'fear of failure'.

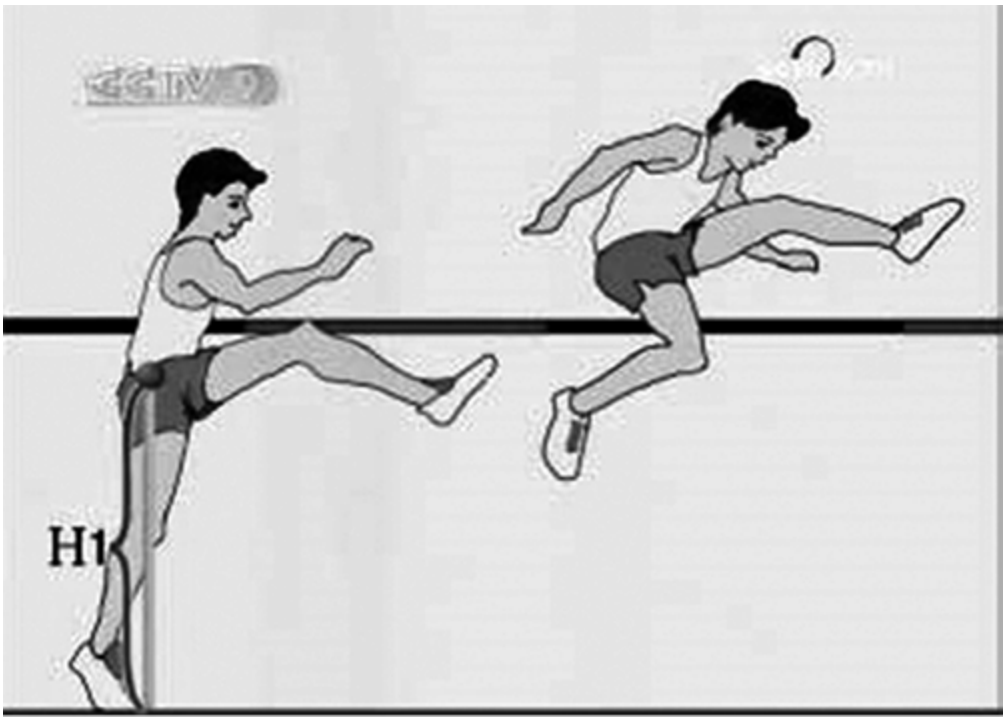
As per Wikipedia, thinking out-of-the-box is a metaphor to think differently, unconventionally, or form a new perspective. This phrase often refers to novel or creative thinking.

Some people call lateral thinking as out-of-the-box thinking.

Let me share some examples of how this has helped individuals, and organisations succeed.

6.1 How Thinking Differently Leads to Success

You might have seen athletes who participate in high jump sport. For quite a long, high jump, used to believe in a concept, that the body should be upright, and one leg would first cross the obstacle, then the entire body will go over it. See the picture.



Some of us, in our childhood might have done this kind of high jump.

Then somebody might have thought to do things differently, decided to cross the bar first with the head, and then mid-section, and then legs. Though it would have been awkward initially, that became the best way to do the high jump.

In 1968, the Olympic Games held in Mexico where something extraordinary happened in the high jump. Relatively unknown athlete, Dick Fosbury, prepared to complete his first attempt at the high jump event. As a teenager, he failed to get into his high school basketball team. Fosbury had failed at his attempts at various disciplines within athletics. He was six feet and four inches; hence he chose high jump, but even in high jump, he was not so successful; therefore, he decided to do things differently.

Before Dick Fosbury's Olympic high jump event, athletes relied on three techniques to clear the high jump bar. They were the scissors, western roll, and a straddle jump. You can see these techniques in the below-mentioned picture.

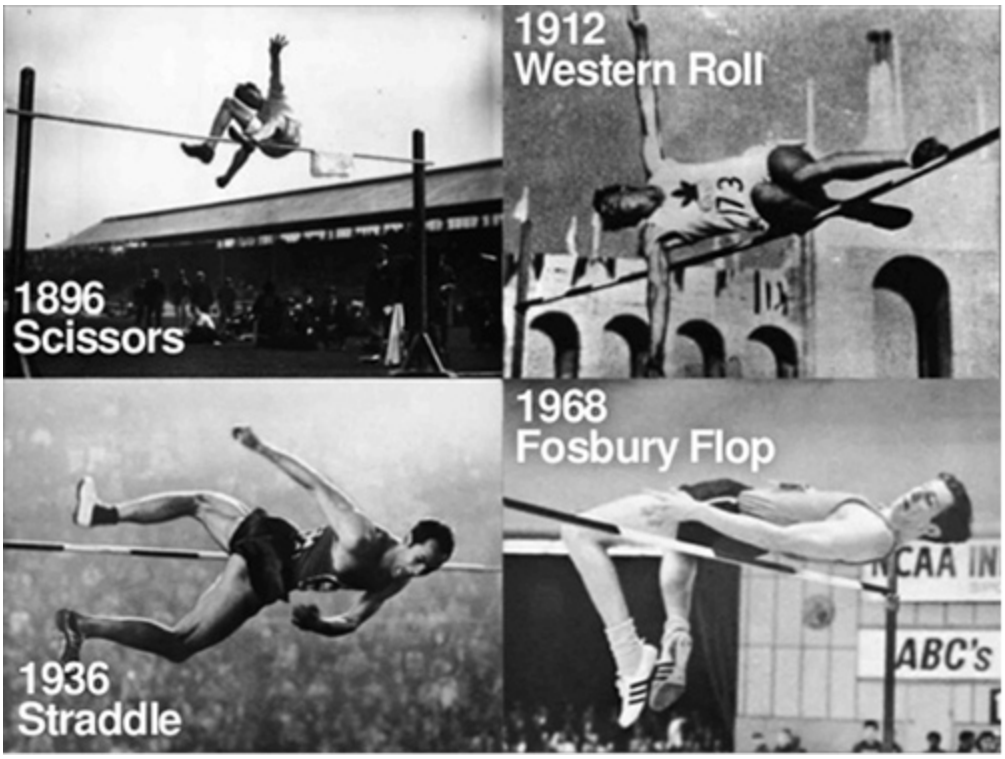


Image Source: Britannica Academic

All these three techniques had one thing in common: they were designed to allow the athlete to land safely on their feet after clearing the bar.

However, Fosbury knew that he had little chance of winning against top athletes using these techniques.

He had no choice other than innovating new techniques, for competing at the highest level. He decided that rather than jumping face forward, using the conventional "straddle" technique, he would jump off the "wrong foot", arch his back, and clear the bar backwards.

Incidentally, Fosbury received heavy criticism from his coaches, and the press, for his unconventional jumping technique (the world doesn't accept changes so easily).

Reportedly, some local newspaper even called him the "World's laziest high jumper." However, such criticism didn't stop Dick Fosbury from perfecting his new "Fosbury Flop" technique, which soon paid off.

Fosbury won the Olympics qualifying championship, and thus, qualified for the upcoming Olympic Games in 1968, this was his opportunity to display this new high jump technique, and he did not disappoint himself.

Dick Fosbury used his "Fosbury Flop" to win the gold medal, as well as to break the record. His innovation totally changed the high jump sport forever.

Within a few years after the Olympics, the "Fosbury Flop" had become the conventional technique for a high jump athlete. Since then, every Olympic gold medallist, and record holder has successfully used the "Fosbury Flop" technique to win high jump.

Fosbury's willingness to experiment with new ideas contributed to his success, but something else also played an important role—his environment.

Of course, Fosbury deserves an accolade for his out-of-the-box thinking, but his school also played an essential role in changing the high jump technique.

Until the early sixties, high jump athletes used to clear the bar, and land on the hard ground or loose soil, etc. thus, all high jump techniques attempted to ensure that the athletes landed on their feet, to avoid any injury.

Forbury studied in a high school, which was one of the first, to install a deep foam matting for high jump landing. This cushion allowed Fosbury, to try out new ways to clear the bar, i.e., landing on his back, instead of his leg.

Thus, there was no way that the "Fosbury Flop" technique could have been innovated before the introduction of the foam mats—because the innovation of the "Fosbury Flop" depended on the existence of a foam mat for a soft landing. That is why, the right environment also plays an essential role in the success of a person and institution.

Now, I hope you might have realised why most of the Olympics medals were won by developed nations.

6.2 How Out-of-the-box Thinking of Proctor & Gamble Employees Helped the Company

Vicks is one of the most successful products of the famous FMCG player Proctor & Gamble. Vicks was earlier categorised as allopathic medicine.

Allopathic medicine prices were not regulated in India until 1962, but looking at the Chinese aggression at North-east India, the Government feared an increase in prices due to the shortage of medicine or drugs. This led to the control of drug prices in 1962. The act empowered the Government to control and prohibit the production, supply, distribution, trade and commerce of any commodity deemed as "essential". The India-China war eventually ended, but the Drug Price Control Order (DPCO) remained. Its various iterations (including the 2013 version), defined drugs as "any pharmaceutical, chemical, biological, or plant-based product including its salts, esters, isomers, analogues and derivatives, conforming to standards specified in the Drugs and Cosmetics Act, 1940".

In 1966, the DPCO made prior approval of prices by the Government mandatory to manufacture drugs. Vicks being an allopathic substance, the company couldn't increase the price, as price increase would have violated the Government's DPCO.

Price and profit ceilings by Government called for severe cost-cutting measures by Proctor & Gamble. To reduce production costs, the petroleum base of the product was replaced with locally sourced oils. The chemists were not happy with low margin, and finally, in 1983, a nationwide boycott by chemists placed the company under an immense strain. The boycott was to get a higher margin.

There was no scope of price increase because of Government regulation; hence, the decision to provide a higher margin would have eroded the profitability of Proctor & Gamble.

Between DPCO and the chemists' boycott, Vicks was hard-pressed for solutions. Top management of the company did many internal meetings, but no solution was found.

During one of the brainstorming sessions, an employee of P&G came up with the revolutionary idea of rebranding Vicks as an Ayurvedic product. It

was a watershed moment for the history of the brand, as Ayurvedic products were not covered in the DPCO.

The DPCO applied to "pharmaceutical, chemical, biological or plant-based products" thus leaving little scope for the exception. However, to encourage indigenous, small and medium industries, and to reduce import, it excluded three types of drugs. These were "any medicines included in any bona fide Ayurvedic (including Siddha), and Unani (tibb) system of medicines; any medicine in the homeopathic system of medicines; any substance to which the provisions of the Drugs and Cosmetics Act, 1940 (23 of 1940), do not apply".

Vicks's research team corroborated its ingredients with ancient texts at the Ayurvedic library at Bombay University and claimed that Vicks is based on Ayurvedic principles, which got approved, and finally Vicks was registered as an Ayurvedic brand under the Indian system of medicine.

The benefits of being registered as an Ayurvedic brand were enormous, as it was exempt from licences, excise duty, and most importantly – price control. Being an Ayurvedic medicine, Vicks could freely be circulated in non-drug stores, which led to a huge increase in Vicks's sale.

Finally, P&G managed to solve their problem with the help of out-of-the-box thinking.

Let's go through another story of a company where the problem was of a different type.

6.3 Solution Can be Simple

A toothpaste factory had a typical problem. They sometimes dispatched empty toothpaste boxes, without the toothpaste tube inside. Of course, it was terrible on the part of the company, as shopkeepers were sometimes getting an empty box. Realising the problem, the CEO of the company conducted a meeting with his top management. They agreed to hire an external engineering company, to solve their empty boxes problem. The project followed the usual process: budget, RFP, and third-parties' selection. Two months of hard work, and after spending 80 lakh rupees, they found the solution.

They solved the problem using a high-tech precision scale, which would sound a bell and flashlights whenever a toothpaste box weighed lesser than it should. The line would stop; the operator would walk over, remove the defective box, and press another button to re-start the line. Because of the new package monitoring process, no empty boxes were being shipped out of the factory. The CEO was delighted to see the solution. For the next few months, he didn't receive any complaint about the empty box.

One day, while taking rounds of the factory, the CEO went to toothpaste packing line (line responsible for putting the tube into the box), to check out the part of the line where the precision machine was installed. He observed that just ahead of the new 80 lakh rupees solution, sat a 500 rupees table fan, blowing the empty boxes off the belt, and into a bin. He asked the manager what that was about.

"Oh, that," the manager replied, "actually, the operator from maintenance put this fan there because he was tired of walking over to re-start the line every time the bell rang."

The CEO realised that if an empty box problem had been discussed with line operators, the company might have saved 80 lakh rupees. Nevertheless, the CEO learnt his lesson.

Asian Paints is India's largest paint manufacturer. Let's know how one of the co-founders thought out-of-the-box, to penetrate the rural market.

6.4 How Asian Paints Seized the Opportunity

Champaklal H Choksey was one of the founding members of Asian Paints. In the initial year, Asian Paints was getting very tough competition from foreign as well as Indian paint companies. During one of the village tours, Mr. Choksey observed, that villagers paint horns of their bull in a bright colour. The problem the villagers were facing, was their requirement was very less but, they had to buy the paint in a large pack; hence, affordability was a big challenge for poor villagers. Mr. Choksey realised the potential and launched paint in 50 to 100-millilitre pack, which no other paint makers were supplying.

This helped create demand for Asian Paints in rural areas, and thus, stockists and retailers were happy to keep Asian Paints and sell. Once the relationship between shopkeepers and Asian Paints established well, it was much easier to penetrate further into the paint segment.

Thus, the decision to launch smaller packs helped Asian Paints grow, and be established as India's biggest paint company.

I hope you would agree with me that out-of-the-box ideas can help individuals and companies excel.

Now let's see things differently, i.e. how some of the new business models appeared.

6.5 How Aggregator Business Works

The world's largest taxi service provider, Uber's daily rides are 17 million in number. World's largest lodging provider, Airbnb, provides 2 million people night stays daily; and the world's largest retail and e-commerce company, Amazon, dispatches 1.3 million packages daily.

What is the common factor among all these number one players, in their respective fields? They do not own things generally that they sell, i.e. Uber does not own taxis, Airbnb does not own hotels, and Amazon does not own 95 per cent of the products it sells.

These companies act as aggregators i.e., they bring service or product providers and service or product seekers on the same platform. The platform is online, which has no delay.

When the online platform was not available, newspapers were acting as aggregators; hence, you might have seen tonnes of Classified advertisements. Now, Classified advertisement has changed the form, and people put their offering on the web portal, and seekers easily find, and avail their service or products.

In the first instance, out-of-the-box thinking seems illogical; hence, people are shy to share such ideas in public. Someone rightly said, "Most ideas are

killed in the mind only because of fear," here fear is 'what would people say?' During the brainstorming session, all ideas should be written down, without being judgemental, and nobody should be allowed to pass their judgements. The reason behind noting down every idea is to encourage participants to come up with all sorts of ideas, even the silly ones, as out-of-the-box ideas can't come by logical thinking in a straight line.

Do you use out-of-the-box thinking to solve your problems?

In the next chapter, we will go through 'Power of Perseverance'.

CHAPTER 7

POWER OF PERSEVERANCE

"Don't let your failures bring you down. Don't be a quitter; persistence is the key."

– Abraham Lincoln

Persistence is doing something despite challenges or delays in achieving success. There would be difficulties in the journey of achieving bigger goals; hence, we must have the perseverance to achieve our goals.

In the previous chapter, you have read about the power of dreams. Most people dream, but only a few can fulfil their dreams. Martin Luther King Jr said, *"If you can't fly then run, if you can't run then walk, if you can't walk then crawl, but whatever you do, you have to keep moving forward."*

Those who have achieved success are the ones who have the skill of perseverance.

Michael Jordan is considered the greatest basketball player the world has ever seen. He once quoted, *"I've missed more than 9,000 shots in my career. I've lost almost 300 games. 26 times, I've been trusted to take the game winning shot, and missed. I've failed over and over and over again in my life. And that is why I succeed."*

In ancient Indian texts, it's mentioned that "Anybody can start, but those who start with the end in mind are the winners." Perseverance keeps you dedicated to your goal.

7.1 Karoly Takacs and his Perseverance for Olympic Gold

Karoly Takacs, 28, was an officer in the Hungarian army. He was considered one of the best pistol shooters in the world; hence, widely considered to win gold in the upcoming Olympic Games. Then one day, disaster happened.

During an army training session, a hand grenade exploded in his right hand and permanently damaged it. The dream of gold-winning was shattered. He could have gone into depression, cursing his luck. But, not Karoly. He was determined to win the Olympic gold.

Rather than thinking on what he had lost, Karoly decided to focus on what he still had, the determination to succeed, the burning desire of getting the gold medal, the mental strength, and a healthy left hand.

Karoly was back on the shooting range within a month, learning to shoot with his left hand. It was not so easy; he had never done shooting with his left hand. The right shoulder pained, the left hand was unsteady, but he was determined. Two successive Olympics were cancelled due to World War II, and finally, the games came to London in 1958; 10 years after Karoly's accident. From Hungary, Karoly Takacs was chosen to represent in the shooting event.

Guess what? He won the gold, that too by shooting with his left hand.

Isn't it an amazing story of the power of perseverance?

7.2 Thomas Alva Edison's Incredible Story

When Thomas Alva Edison was a young boy, school teachers used to called him "stupid", and "unteachable". He spent his initial years working and being fired from various jobs, including termination from a telegraph company at the age of 21. Despite these failures, he never strayed from his true passion, which was inventing. His perseverance for invention led him to obtain 1,093 patents in his career. A few of his remarkable inventions are the light bulb, stock printer, phonograph, and alkaline battery. Edison claimed that he faced more failure during his career than success, therefore imaging, how determined he was.

Edison once said*, "Genius is 1 percent inspiration, and 99 percent perspiration."*

Edison had become famous after inventing the light bulb; after that, he wanted to invent light bulb filament, so that its affordability and quality could go up. At the time, ore mines were far away from his place; hence, shipping

costs were very high. To counter this issue, Edison opened his ore mining plant in his state. For almost a decade, Edison devoted all his time and money to the plant. He realised a lot of scope of improvement in mining operations, and hence, worked on that and finally obtained 47 patents for inventions designed to make the plant run more smoothly. After doing everything possible, Edison's project still failed, due to the low-quality ore.

Nevertheless, one of the 47 inventions in the mining plant clicked. A newly designed crushing machine revolutionised the cement industry and helped him to earn enough money that he lost in failed ore mining.

Henry Ford is credited for mass production of cars, thanks to his moving assembly line concept, but do you know, Edison's ore mining project inspired it? Thus, it may be believed, that Edison paved the way for modern-day industrial production.

Therefore, despite all negative feedbacks and failures, Edison managed to become one of the greatest scientists.

Similarly, one more great personality faced numerous failures, but his power of perseverance helped him succeed.

7.3 Abraham Lincoln and Failures

Abraham Lincoln faced many failures in his life. Repeated failures shatter the person, but he chose not to bow against failure. His perseverance led him to become one of the greatest US presidents of all time.

Before becoming a President, he encountered several challenges. Some of these are: his mother died when he was just nine years; his business measurably failed; he lost state legislature election; he lost his job; wanted to go to law school, but couldn't even get admission; tried starting a business and borrowed some money from his friends but by the end of the year, he faced bankruptcy. Can you imagine how tough it was for him? Still, he decided not to give up.

Next time again, he contests in the election for the state legislature, and this time he won. Likewise, a year later, he got engaged and was about to be

married. He thought everything would be right now, but then, his fiancé died, and this incident, led to his nervous breakdown and he was bedridden for six months.

After recovering, he again tried entering politics and faced defeat many times. Still, he did not lose hope; he kept on doing social work, and finally was elected President of the US.

Do you know somebody who faced more challenges than Abraham Lincoln did? At least, I do not. Therefore, what was the reason for his success? Obviously many qualities, but one, which stands out, is his perseverance.

7.4 Albert Einstein and Perseverance

Einstein is now known as a genius, but young Albert Einstein was not viewed as much of a bright scholar. His parents and school teachers began to think he was mentally disabled and socially awkward because he did not start to speak until the age of four or read until he was seven. Einstein was eventually expelled from school, and even denied entry to Zurich Polytechnic School. After education, he worked as a patent clerk, and finally, his perseverance helped him reach the pinnacle of scientific research.

The purpose of sharing all the above stories of famous personalities is to emphasise, that success can be achieved despite tough challenges if there is perseverance.

If you want to taste success, be ready for difficulties; it is the perseverance, which will keep you moving.

In the next chapter, we will go through the power of deep diving.

CHAPTER 8

POWER OF DEEP DIVING

"Ideas are like fish. If you want to catch little fish, you can stay in the shallow water. But if you want to catch the big fish, you've got to go deeper."

– David Lynch

A deep dive into something is a thorough investigation and analysis of it. We take hundreds of decisions, and arrive at numerous conclusions, based on our experience. We face many challenges in our lives today, and at the same time, we need to make suitable decisions to solve the problem. To arrive at the solution, it's essential to understand the problem first; hence deep dive helps in understanding and finding the solution.

You might have heard that phrase "Less knowledge is very dangerous." The synonym of less knowledge is superficial knowledge. In the fast-moving world, we are in a hurry; therefore, there is little time to understand the thing, and immediately, we form notions.

Deep diving into things can be time taking, and not so easy, but it's undoubtedly, a recipe for success. We often ignore this skill, because of our over-confidence.

In this chapter, I would like to share how things can be understood by going deep into the subject.

Let's understand the importance of science and technology for a country like India.

8.1 How Lack of Innovation Can Push Prosperous Countries Into Deep Poverty, And Why Science and Technology are

Essential for Developing World

As per the studies, India's GDP contribution to the world was 24 per cent in 1750; which fell to 2 per cent, in 1900. Even today, it is approximately 6 per cent.

No wonder why, in good old days, India was called, 'The golden bird.'

It goes for China too whose contribution in 1750 was more than 30 per cent of the world's GDP.

At that time, when India and China were prospering, America was busy fighting the independence war, and Europe was going through a new reckoning, due to the French revolution. Fast forward to the 21st century, the entire story is turned upside down, and now an average American and European is 25 times richer than an average Indian.

So, you might be thinking, what went wrong?

The answer lies with the fact that India and China missed the bus of the first industrial revolution. Export has been a critical component in the prosperity of any country in the world; you name any developed country today, and by default, all will be export-oriented countries. Eg. Germany, UK, China, Japan, UAE, South Korea, etc. Before the first industrial revolution, India and China dominated the world in terms of exports.

In the middle of the 18th century, the source of power was human labour, and almost all industries were dependent on skilled hands. India and China had an abundance of human labour, because of the higher population; hence, India and China never looked for alternative power sources (wind, flowing water, etc.) While on the other hand, Britain had a shortage of manpower; hence, they were actively looking for an alternate power source. They say "necessity is the mother of invention"; hence, British people learnt the art of harnessing flowing water, wind, and steam for power generation. This gave a big boost to their industrial production, which gave them a massive advantage over other countries. Power looms outdid handlooms, and thus, India and China's textile industry suffered heavily. This was the first industrial revolution.

Europeans must get credit for this technological breakthrough, which helped them become exporters of the world. Thus, this marked the beginning of European supremacy.

The second industrial revolution was in the second half of the 19th century when again, Europeans and Americans focused on large scale production with electric motors, internal combustion engines, and even moving assembly lines. India missed this bus again, and paid heavily, for being a laggard in adopting science and technology. Concisely, research and development was then the major differentiating factor between India and Western countries.

The third industrial revolution started with the advent of computers in 1959. This changed the way we used to manufacture, communicate, and analyse.

Post this, China and India's per capita income became so low, that manufacturing in these countries, or outsourcing to these countries, became attractive for developed countries. China seized the opportunity, by opening its economy in 1978, which helped them become, 'Workshop of the world' (manufacturing hub).

Finally, after one of the worst economic crises in India, the Government forced to open its economy in 1991. This economy's opening helped us grow in leaps and bounds, as it infused the much-needed money, and technology in the market. Still, by then, China had advanced too much in production; hence, despite the low manpower cost, very little scope was left for India to produce and export. Luckily, the language English, though cursed by many so-called nationalists, came to our rescue. English gave us an edge in information technology, and soon India became the "back office" of the world and the hub of IT and ITES services. This contributed from nowhere, to one-third of India's total exports by the late nineties.

Recently, India has grown at 6 per cent per annum, compared to the rest of the world at 2.5 per cent, because of our USP of low manpower cost. However, this growth story is likely to come to a grinding end because of new machines.

Developed countries are at the cusp of embracing the fourth industrial revolution, which is an imminent threat. Artificial intelligence, machine learning, and mechanised workforce can easily defeat cheaper Indian manpower; thus, India's biggest USP will be in danger. Already we are witnessing stagnation in the IT sector, because of algorithm-based technology being used by importers of IT services. Thus, for us the fourth industrial revolution is essential, and this time, India must not miss this bus.

The fourth industrial revolution has already started. It is everywhere, and right now, in your hand as well. As per Prof. Schwab, it is characterised by a fusion of technologies, blurring the lines between the physical, digital, and biological spheres. It is marked by emerging technology breakthroughs in several fields including robotics, artificial intelligence, nanotechnology, quantum computing, biotechnology, IoT, 3D printing, and autonomous vehicles. Siri by Apple, and Alexa by Amazon, are classic examples of machine learning. Now, these devices talk to you, and based on the historical data; they even give suggestions. Autonomous driving is almost a reality now.

For a developing country like India, the only option is to join the fourth industrial revolution bandwagon.

I hope you might have got a 360-degree view of the problem, and solution.

Let's talk about something which you noticed, but never bothered to find the reason behind it.

8.2 Water Is Essential for Life While Diamond Is Not, but Why Is Diamond Costlier than Water?

Here, how come something, which is essential for life, cheaper than a non-essential item?

The answer is a complicated phrase, "the law of diminishing marginal utility." Oh, it went above the head, do not worry, I also struggled initially, let me demystify it. The higher the supply we have of something and the more we use it, the less we value it. We have oceans of water, large rivers, and huge reservoirs of groundwater, which we carelessly pump and use. We have far

fewer diamonds, hidden, and buried in rock. In simple terms, we do not respect the things that are of inadequate quantity, while we respect the rare things more. Water is available everywhere, while diamond is not readily available; hence water has less value than diamond; hence it's a game of demand and supply, i.e., if supply is more than demand, value is less.

Let me reverse this situation, imagine a rich person with a diamond ring is lost in a jungle, thirsty for hours, and is about to faint or die because of dehydration, and come across you in jungle. You are carrying one litre of water, and know from where to fetch the water. This rich person asks for your water, but you put the condition that you will give water only if the rich person gives his diamond ring to you. What do you think the rich man is going to do? Will he think about why he should give his two lakh rupees diamond ring for 20 rupees worth of water? Or would he gladly offer his diamond ring and take water? Of course, he will choose water, which is supposed to be much cheaper. Hence, the cost of any product depends on demand and supply.

Let me explain this theory slightly differently. A labourer works in scorching summers and gets paid the least; while a CEO working on laptops, in an AC cabin is paid the highest. The reason is demand and supply. The job of a labourer is not rare in nature, and many people are ready to do the same, and hence, there's no need to pay too much; while the job of a CEO is very technical in nature, where not many talented people are available, hence, the salary is many times more than a labourer.

Now, I hope you understood the concept of demand and supply. Are you among high demand profile or high supply profile? If it's high supply, immediately upskill, otherwise, things would be difficult.

8.3 In Your Success, Is There Any Role of Nature and Ancient Humans?

Today, you are reading this book at your own comfort. I don't think right now you are worried about the attack of any wild animal, or drenched in heavy rain, or collecting wood for cooking food, which primitive humans used to do. I am telling this because, as human, we have gone through a lot of challenges, but

it's the innovation that helps us, and today we are in best of shape. Let us go through human evolution in chronological order:

- According to the Big Bang Theory, our solar system formed 13.8 billion years ago.
- Earth came into existence, around 4.5 billion years ago.
- First form of life, as a unicellular organism, emerged 3 billion years ago.
- Multicellular organism (sexual reproduction), emerged 1 billion years ago.
- Dinosaur appeared 240 million years ago.
- Monkeys appeared 30 million years ago.
- Apes appeared almost 10 million years ago.
- Humans appeared (Homo habilis), evolved from Ape, almost 2.5 million years ago.
- Humans learnt the art of producing fire 1.5 million years ago.
- Homo sapiens appeared (wise human), 0.3 million years ago.
- Humans started agriculture 12,000 years ago.
- Humans started using metal (copper), 11,000 years ago.
- Civilisation started 6,000 years ago.
- Kingdoms started 4,000 years ago.
- Use of paper started 2,100 years ago.
- Use of windmills started 1,400 years ago.
- Humans started using "zero" in calculation 1,100 years ago.
- The magnetic compass was invented 900 years ago.
- Explosive bombs were invented 800 years ago.
- The Printing Press was invented 600 years ago.
- Telescope and microscope were invented 400 years ago.
- The steam engine was invented 250 years ago.

- Electricity was produced 220 years ago.
- The mechanical computer was invented 200 years ago.
- Plastic was invented 150 years ago.
- The modern telephone was invented 145 years ago.
- The light bulb was invented 140 years ago.
- The modern automobile was invented 134 years ago.
- Wireless communication with radio waves was invented 125 years ago.
- Television was invented 93 years ago.
- The personal computer was invented 63 years ago.
- The first artificial satellite launched 63 years ago.
- The first time human travelled to space 59 years ago.
- The mobile phone came into existence 36 years ago.
- You appeared on Earth 30 to 40 years ago.
- The internet appeared 30 years ago.
- Facebook appeared 16 years ago.
- Instagram appeared 10 years ago.
- TikTok appeared 3.5 years ago.
- 5G telecommunication trials started last year.
- Coronavirus spread to the world this year.
- You are reading this book "now".

Therefore, in your success, there is the role of 3 billion years of evolution!

In a nutshell, we are in comfort because of many generations' relentless efforts.

The purpose of sharing the chronology is to understand the importance of past work done by many unknown.

OK, since we are talking about chronology, let us go through another one.

8.4 Timeline of Automobile Invention

In the last 150 years, one of the greatest inventions, which has helped humankind, is the invention of modern automobiles. However, as they say, "What you see is the tip of the iceberg, but what is not visible is huge base underwater"; similarly, in any success, there is a long list of efforts.

In the below-mentioned year chronology, you will realise how the modern car was invented.

- 1335 – Dutchman Guido von Vigevano drew sketches of a Windwagen (windpower-driven vehicle) but not much of success was achieved. It had the three key parts of a modern car: an engine (spinning windmill sails), a set of wheels and gear. It was supposed to be wind power-driven, but not much of success was achieved.
- 1478 – Leonardo da Vinci invented the self-propelled car. However, the car remained a sketch on paper, and never actually made. It is not exactly like a car but similar to a cart and had no seat.
- 1769 – Nicolas-Joseph Cugnot built the first self-propelled road vehicle (steam-powered), in France. It was a three-wheeled tractor, made for the French army, with a maximum speed of about two and a half miles per hour.
- 1789 – Oliver Evans, an American, received the first US patent for a steam-powered land vehicle.
- 1801 – Richard Trevithick, a British inventor, built a steam-powered road carriage. It is considered the first tramway locomotive, designed for use on road, not railroad.
- 1807 – Francois Isaac de Rivaz, a Swiss inventor, built an internal combustion engine, which used a mixture of hydrogen and oxygen. He also designed a car for the engine, the first automobile powered by internal combustion. Unfortunately, it was unsuccessful.
- 1823 – British engineer, Samuel Brown, invented an internal combustion engine with separate combustion, and working cylinders.

- 1832 – Robert Anderson invented the first crude non-rechargeable electric carriage, in Scotland.
- 1863 – Belgian engineer, Jean-Joseph-Etienne Lenoir, invented the "horseless carriage", internal combustion engine, capable of speeding up to three miles per hour. This was the first commercially successful internal combustion engine.
- 1867 – German engineer, Nicolaus August Otto, improved on the internal combustion engine. His engine was the first to burn fuel directly in a piston chamber efficiently.
- 1870 – Julius Hock, of Vienna, built the first internal combustion engine running on Petrol.
- 1877 – Nicolaus Otto built the four-cycle internal combustion engine (similar engine is used today in our cars).
- August 21, 1879 – American inventor, George Baldwin, filed the first US Patent for an automobile. This invention was more similar to a wagon with an internal combustion engine.
- 1885 – German engine designer, Karl Benz, built the first true automobile powered petrol engine vehicle. It had three wheels and looked quite similar to a carriage. Karl Benz patented new technology hence called, 'Father of the modern automobile.'
- 1886 – In Michigan, Henry Ford built his first automobile.
- 1886 – Gottlieb Wilhelm Daimler and Wilhelm Maybach invented the first four-wheeled, four-stroke engine, in Germany.
- 1893 – Brothers Frank and Charles Edgar Duryea invented the first successful, gas-powered car, in the United States.
- 1895 – George Baldwin Selden, an American inventor and engineer, invented a combined internal combustion engine with a carriage. It was never manufactured.

- 1896 – The Duryea brothers started the first American car manufacturing company in Springfield, Massachusetts. It was called Motor Wagons.
- 1900 – A steering wheel designed to replace the steering tiller.
- 1906 – Alabama sets a state maximum speed limit of eight miles per hour, i.e., 12.5 kms per hour.
- 1913 – 'Ford Model T' production rockets from 7.5 cars per hour to 146 cars per hour, thanks to the assembly line's utilisation.
- 1924 – The car radio introduced.
- 1940 – The first four-wheel drive, all-purpose vehicle designed for the US Military. It was known as the Jeep.
- 1956 – The Interstate Highway Act creates a highways network, which connects all parts of the United States.
- 1962 – Wisconsin became the first state to create a seat belt law.
- 1974 – Airbags become a new car safety option.
- 1995 – The car, Global Positioning System, or GPS was introduced.
- 2001 – Hands-free Bluetooth was introduced in car.
- 2003 – Automatic parking capability was introduced.
- 2004 – LED headlamp was introduced.

Hope you would agree with the fact that a lot of work has been done in the field of automobiles, and the features you are enjoying in your car was invented by thousands of unknown inventors.

It's a perfect example of continuous improvement.

Automobile engine works on the principle of compression, i.e., fossil fuel is injected with pressure and it's compressed by a piston to create high temperature to burn the fuel, i.e., fire; energy thus expands, which pushes the piston.

Therefore, it is the fire in the cylinder, which rotates piston, and in turn, crankshaft, gear, and the wheels rotate.

Thus, fire is the root cause of a car's petrol or diesel engine and subsequently, the car's movement. Let us understand how fire helped human in a real way.

8.5 How Fire Helped Humankind

An uncontrolled fire can lead to devastation, at the same time, controlled fire can lead to prosperity. The same goes for our every act, 'anything in excess is bad'. Now let us go back to our topic again.

Fire helped early humans protect themselves from dangerous animals. It helped them see in the night and provided warmth in the winter. Later on, fire helped humans to forge steel, and we know how steel has changed our lives. Fire helped us pasteurise milk, helped our mobility in a big way, and the steam engine led to a mass movement. Do you know the car you use, i.e. if it's a diesel or petrol car, then, the engine is run by burning the fossil fuel inside the engine cylinder? Not only this, but half of the world's electricity is also produced through burning coal. Thus, fire helped humans excel in every possible way, but the most important contribution of fire is making humans wise.

Yes, you read it right, fire helped humans become wise!

Cooking vegetables or meat killed most of the harmful germs, which helped reduce the human mortality rate. This is important because cooked food allowed for healthier, long-lived humans.

The most significant part is that cooking made food softer and helped digest it easily.

Hence, early humans didn't need to spend hours chewing, tearing, and digesting meat or food. This led to the decrease in muscle strength, shorter intestine, and most importantly, the development of a bigger brain. Almost all the bodily energy, which was earlier being used for muscles development, and digesting (intestine), was then diverted to the brain. That is why humans have the biggest brains in mammals than any other species. Research shows that the human brain consumes around 25 per cent of our energy; it's important to

divert that energy from somewhere else. Therefore, the human brain developed because of the invention of fire. Further humans invented or found more ways to make their life easier, thus better. This further helped to save more energy available for the brain.

Eventually, had some other animals discovered fire, earlier than humans, who knows what the world might look like now?

Maybe humans might not have survived, if they survived, then they would have been locked away in some zoo for someone's amusement.

In India, more than 50 per cent of the population depends on agriculture for their livelihood. Let's understand the challenges, and what can be done to help them.

8.6 How Is Agricultural Distress Taking the Lives of Farmers?

In India, close to three lakh farmers have died by suicide in the last two decades. Currently, agriculture contributes roughly 16 per cent of India's GDP, which was 43 per cent in 1970. In the last 10 years, agricultural growth has been approximately 1.5 per cent while India's GDP has grown over 6 per cent. You will be amazed to know, that the Government primary school teacher's salary, has jumped almost 250 times in the past 45 years; but the price of wheat has gone up only 19 times.

As per NSSO, almost 62 per cent farmers, earn less than 5,300 rupees per month, i.e., living in acute poverty.

For the farmers, poverty is nothing new but a constant part of life, going on for generations. In fact, agriculture distress is a recent phenomenon, as the British had enacted the Deccan Agriculturist Relief Act, 1879.

Therefore, the question arises – Why is the situation is so bad?

The answer, which I found, is:

The Vicious Cycle:

There is no proper irrigation facility. Only 40 per cent of arable land has irrigation facility through canal and tube well, and rest of the 60 per cent

depends heavily on rain. If monsoon fails for two consecutive years, there is no way a poor farmer can pay his debt. The money-lender puts pressure and humiliates the farmers. Looking at his deplorable condition and no hope, the farmer decides to kill himself.

Farmers get only 20 to 50 per cent of what consumers actually pay, i.e., if you, as a consumer, pay 40 rupees for cauliflower, the farmers get 8 to 12 rupees for it; the rest goes into the pockets of intermediaries. Therefore, this system of intermediaries drastically reduces the earnings of farmers.

Price fluctuation, due to bad weather, also hampers earning potential of these farmers. Due to less rain, the produce goes down, which in turn, reduces earning potential.

The Trap of Cash Crops:

To earn more, a lot of farmers have moved from food grain production to cash crop production, i.e., cotton and sugarcane. The good thing is, cash crop cultivation can be two or three times more profitable than food grain cultivation, but then the risk associated is also high, as the cost of production (i.e., seeds, pesticides, etc.) of cash crops is comparatively higher, and if the crop fails due to poor rain or crop disease, the farmer falls into a huge debt trap and eventually dies by suicide. This is why the farmer suicide rate in Maharashtra and Gujarat is more than UP or Bihar, as more cash crops are produced in these two states.

Land Holding:

Due to population increase, the average landholding has reduced to 1.5 hectare in 2016, from 2.8 hectare, in 1971. It is a no-brainer, that if land holding reduces, then the farmer's income will also go down.

Small and medium farmers can't afford costly high-yielding seeds, and inorganic fertilisers; hence, their productivity (produce per unit of land), is low. Bihar has maximum small and medium farmers, and yield or hectare of wheat there, is half of that of Punjab's, and yield or hectare of rice is one-third, of that of, Karnataka's. Less production leads to low income. Poor farmers can't

afford their children's basic education; hence, these kids have to leave schools to help their father or become a labourer in cities.

Infrastructure Woes:

As per various reports, in India, 30 per cent of farm produce goes waste. This happens, because of lack of storage facility. This kind of loss directly affects the potential earning of the farmers. With a lack of availability of cold storage facility and unaffordability of transportation, the farmer is compelled to sell the produce at a throw-away price, to avoid deterioration of his farm produce. Rich traders store it in another district's storage house and wait for prices to go up so that they can make healthy profit buy from the farm produce. Storage facility near the farmers would have helped them store their produce, and wait for the right time to sell.

Lack of Awareness and Lack of Advanced Methods:

Lack of awareness about the right quantity of usage of fertiliser increases the cost of production with increased yield. NPK consumption ratio was 4.3:2:1, in 2001; which has become 8.7:2:1, in 2015. This clearly shows that farmers are using more nitrogenous fertiliser (urea).

Whenever a country faces any natural disaster like flood, drought, hailstorm, cyclone, etc. the farmers are the ones who are worst sufferers, as their standing crops get destroyed heavily, which in turn, affects their incomes.

Our social system also harms our farmers. As per few studies, the debt trap's biggest reason is their daughter's marriage and a family member's funeral expenditure. Both are society-made problems.

China produces 600 metric tonnes of food grain with lesser cropped area, compared to India's 270 metric tonnes. Wheat productivity in France is three times more than India. These examples clearly show that there is a huge scope of improvement in Indian farm productivity, which in turn, can increase farmers' income levels.

So, what are the solutions?

Market Access Facilities:

1. Integration of *mandis* (where farmers sell their produce) through the internet, so that farmers can get to know where they should sell to get the maximum price. Replication of Karnataka's 'Rashtriya eMarket Services Pvt.' (like eNAM), pan-India will definitely help all the farmers of our country.
2. More cold storage and warehouse facilities near farmers must be made so that they can store their produce, and wait for a better return.
3. More accountability from agriculture establishments.
4. More funds should be allocated to agriculture research bodies, like the Indian Council of Agriculture Research (ICAR).
5. Krishi Vigyan Kendra (KVK), was established to support farmers, in adopting new agriculture techniques, but their groundwork is also inadequate. Currently, there are more than 650 KVKs established in India. Better monitoring, and KRA based performance management of these KVKs, will bring more result.
6. Agriculture universities were established in the '50s, with the idea of solving local problems, but to the contrary, the quality of research being done by these universities are below par, that these don't yet benefit even the farmers living in their neighbourhood. Let these agricultural universities prove how they have made the life of farmers better with their research findings.
7. Research outcome by ICAR, KVK and agriculture universities is low. The Government must constitute a body like the CAG to audit these bodies on parameters, like actual research outcome. Strict action must be taken for slackness in research because the affected party is the poor farmer.

Awareness Drive:

1. Increase in awareness about crop insurance will help farmers to negotiate natural calamity in a better way. As per sources, currently, crop insurance penetration is just 35 per cent, which is very low.
2. Farmers must be encouraged to adopt integrated farming system model, i.e. farmers should grow field crop, do horticulture, dairy, fishery,

vermicomposting, mushroom cultivation, and tree plantation on the boundary of the fields. These will give them incremental earnings.

3. Soil health card is an excellent project of Government to help the farmer to know which nutrient is missing in his field so that he can put only that specific nutrient fulfilling fertiliser. Currently, farmers put every possible fertiliser, which increases his input cost.

Indian Government's Role:

1. Through legislation, there should be a cap on interest being charged by moneylenders. It can be RBI's prime lending rate plus a maximum 7 per cent. This will help poor farmers to avoid the unnecessary burden of interest.
2. The Government must subsidise high-yielding varieties. So that, marginal farmers, can also increase their output and eventually their incomes.
3. Currently, in most of the states, the farmer's lands are distributed at different places. Consolidation of landholding will help farmers to save time, money, and energy.
4. The Government must increase spending on increasing irrigation cover for the long-term benefit of the farming community and the country.
5. Remove, or reduce intermediaries through directly connecting the end-user with the farmer. Here startup can help, by making an app, enabling direct purchase from the farmer increasing his income.
6. To curb inflation, it seems to me, that the Government deliberately wants to keep farm produce prices low. This policy adversely affects the farming community, who are the most vulnerable.
7. The meteorological department can be made proactive about the rain-spell forecast, so that farmer can plan to sow accordingly.
8. National Farmers Commission had submitted a brilliant report in 2006 on Indian agriculture and gave almost 50 suggestions. As per my back-of-the-envelope calculation, only 50 per cent of those were implemented.
9. The Government must implant all suggestions in letter and spirit. One of the most important suggestions is to set minimum support price (MSP), as

50 more than input cost of production, on which the Government is not agreeing.

10. Studies have proved that farm mechanisation has helped to increase farm productivity.
11. Easy credit availability, at a very low interest rate like 4 per cent, will definitely be of help to farmers.

You might be thinking if nearly half of pollution is into agriculture then by default, they are the most powerful vote bank, and politicians must be running behind them. Theoretically, there is sound logic behind your thinking, but the reality is very different. Our politicians have divided our farmers into cast, religion, regionalism etc. so much that they are not united.

This absence of unity gives room to politicians to look the other direction.

The last thing is that society must understand that rituals were made to help humans achieve prosperity, but dowry and death ritual hurt the lives of the poor.

Though on paper it seems like the Government is doing a lot of things, in reality, I see a big challenge in execution of those schemes; hence, execution will be key to success.

The Indian state, Punjab, and agriculture are closely associated. Now, let's deep dive into why Punjab is left behind in the economic race.

8.7 What once was India's most prosperous state, is now lagging in development

In the mid-eighties, Punjab gripped in militancy, violence, and chaos, but still one positive thing, that kept Punjab going, was its relative prosperity, and robust economic status. Without these, Punjab would have gone into oblivion, from where returning to normalcy would have been tough.

If we go by the statistics, then in 1994, Punjab was the number one state in terms of per capita state GDP. However, after that, we saw a continuous slide in Punjab's stature, and now it has slipped to number 9, after 26 years. This is

not only a worrying position for the state but also it has a severe impact on India; hence, I tried to find out some key reasons.

Punjab was synonymous with prosperity, but has lost this coveted tag very fast; let us see why. There are many reasons why Punjab's economy is in trouble.

The Punjab Government spends approximately 50 per cent of its total revenue on Government employees' salary and pension. This is excessively high. It's the same for Haryana at 37 per cent, Rajasthan at 34 per cent, Gujarat at 36 per cent and Tamil Nadu at 37 per cent. This means either revenue is low, or Government machinery is heavy.

Due to the model of high expenditure and low revenue generation, almost 20 per cent of its tax revenue goes towards payment of interest, on borrowed money, i.e., one-fifth of the revenue goes away. Punjab's outstanding debt is 32 per cent of GDP, while India's is 21 per cent.

For almost the last 10 years, the Government has been giving free electricity to farmers. This is a burden on the debt-ridden Government. Approximately 8 to 10 per cent, of total revenue, goes towards free electricity subsidy.

Hence, if we add salary, pension, interest, and electricity subsidy the total comes to 80 per cent of state revenue, therefore, Punjab Government gets only remaining 20 per cent, to spend on infrastructure, industrialisation, and job creation.

Punjab was a traditionally agrarian economy. Now, Indian agriculture, in general, is in trouble, hence, Punjab is worst affected.

Agriculture used to contribute 40 per cent of Indian GDP in the mid-'70s, which is down to 16 per cent currently. This figure is enough to tell the declining status of agriculture.

Use of fertiliser and pesticide by Punjab farmers is 7 to 10 times, more than the national average. In Punjab, daily wages are also high; hence, the cost of production automatically goes up. Once India has become a food grain surplus

country, the MSP is not increasing with the ratio of inflation or input cost, leading to an unviable business proposition.

It's shameful that Punjab farmers are dying by suicide. Tractor density is highest in Punjab. Various researches show that owning a tractor for a small and marginal farmer is not viable. In Punjab, tractor became a status symbol for farmers, i.e., bigger tractor means bigger farmer. This led to the unnecessary purchase of higher horsepower tractor, i.e., costly one, which further worsened the debt-ridden farmers.

Ludhiana was a hub of SME (cycle manufacturing, sports good manufacturing, hand tool-manufacturing, hosiery etc.) About 20 years back, Ludhiana was known as 'city of Merc', because of wealth, but once the Central Government started giving tax exemptions to nearby hilly states like Himachal Pradesh, Uttarakhand, and Jammu & Kashmir, lot of SMEs shifted to these states to save tax. Baddi is a small town in Himachal Pradesh, on the border of Punjab.

Baddi is just 50 kilometres from Chandigarh and 150 kilometres from Ludhiana; hence, it became a hot place for shifting base and getting excise and other tax exemption for 10 years. This affected Ludhiana majorly.

Cycle manufacturing is still a big industry in Ludhiana, but now Chinese cycles, as well as parts, are so cheap that most of the Indian cycle manufacturers have started purchasing cycle parts from China so that they can keep themselves afloat. Due to this, small local cycle component manufacturers had to close the business.

Jalandhar was a hub of sports good manufacturers. FIFA World Cup, 1992, was played with mostly Jalandhar-manufactured football. After this, China started manufacturing sports goods in a big way. The mass production and new technology gave the edge to the Chinese manufacturers. Due to this, our Jalandhar-produced sports goods became 30 per cent costlier than Chinese-made; hence, slowly and steadily, the entire sports good manufacturing industry of Jalandhar started crumbling.

Most of the industries in Punjab is labour-intensive. Due to the higher cost of living in Punjab, the labour wages have also gone up. Land price is also more than other parts of India. Punjab gives commercial electricity at seven to eight rupees per unit, while other states offered cheap land and electricity (five rupees per unit). Labour rates are also relatively cheaper in other states. This led to a lower cost of operation in other states like MP, Gujarat, and Maharashtra, etc. Most big cotton industry players of Punjab have expanded in their business in these states.

The technology that SMEs of Punjab were using for production, were outdated. Unfortunately, they didn't invest in research and development. Their apathy towards new technology and upgrading operation has cost them and Punjab dearly.

NRI remittance to Punjab was a major economy booster before the sub-prime crisis in the US. Once the economy of the US, Canada, and the UK went down, the remittance also went down.

Real estate was a major sector, which was contributing to the economy. Property prices were doubling in three to four years, hence, people invested heavily. A lot of businessmen, who had taken a loan against their manufacturing business, diverted the bank loans to purchase property, but once property prices declined or got stagnant, the entire cycle got stuck.

Drug consumption in the youth of Punjab has affected the economy in a big way. One of leading news daily says, "In the northern Indian state of Punjab, more than half of people aged 18 to 35 are using drugs, and at least one person is addicted, in two-thirds of rural households."

State Governments are not considered as pro-industrialist. They want votes from farmers; hence, they don't want to be seen as industry sympathisers. One study shows that 90 per cent of Punjab's state assembly debate moves around farmers.

One of the major reasons for India's exponential growth in the last two decades is FDI post-liberalisation, but Punjab hardly got any FDI or investment; hence, it could not take advantage of liberalisation.

For better living standard, Punjab youth are more inclined to migrate to Canada, US, Australia, and Europe. After migration, people work as drivers, fuel station assistants, run general stores, etc. For this, higher education is not much required. This phenomenon leads to a lower focus on higher education, by rural youth of Punjab.

The next generation of businessmen is keen to settle abroad, hence, this demotivates businessmen to expand their business further.

Debt-ridden Punjab Government wants to increase revenue; hence, conduct a lot of raids on businessmen. Imagine the plight of businessmen, that on one hand, his business is not doing well, and on another had he is being harassed by the tax department. Honest businessmen admit that corruption is so much that to avoid unnecessary hassle, they need to manage corrupt officers.

This is also one of the reasons why many businessmen of Punjab are registering new firms in Delhi or Mumbai. They say it's good to be a small fish in a big pond, rather than a big fish in a small pond.

Despite all the negatives, I am very sure that Punjab will bounce back in the next three to four years now that people are realising their mistakes.

Unions, as well as the State Governments, are also trying to revive industrial production. Therefore, I am optimistic about the revival of the Punjab economy; it might take time, but it is inevitable.

I hope you understood the role of the economy in our lives. India's per capita income is 30 times lesser; yes, you read it right, 30 times lesser than developed countries. Lets' explore what India should do to join the elite club of developed countries.

8.8 What Should India Do to Become a Developed Country?

In this globalised world, India can't stay unaffected by these technological disruptions. The only option for India is to embrace this and become a competitor if not a leader.

First and second industrial revolutions were mechanical, while third and fourth, are digital in nature. India has an added advantage in digital technology; hence, it is an excellent opportunity for us to embrace the change finally. If we can channelise our energies towards the fourth industrial revolution, we can again become the 'golden bird'.

The single most crucial component in capturing the fourth industrial revolution is innovation, and to innovate, India must focus on research and development.

As per, economic survey of India 2017-18, India's spending on R&D is just 0.6 per cent of its GDP vs that of Israel at 4.3 per cent, South Korea at 4.2 per cent, the US at 2.8 per cent, and China at 2.1 per cent. China's absolute R&D spending is 20 times more than India.

Universities play a very important role in R&D, but shockingly not even one Indian university, is in top three hundred universities of the world. At the same time, the private sector also plays a very important role in innovation. According to Forbes reports, there are only 26 Indian companies, in the list of the top 2,500 global R&D spenders, compared to 301 Chinese companies. This means, the infrastructure for innovation, is lacking in India at the grass-root level.

Currently, a bulk of R&D expenditure goes from Central Government followed by some private companies. State Governments are least bothered about spending money on R&D.

These examples tell us what is our status of R&D in India.

Few of the baby steps taken by the Central Government will help us make inroads into the fourth industrial revolution like Atal Innovation Mission (AIM). The Government is committed to establishing Tinkering labs with robots, 3D printing sensor technology, IoT, etc. in more 8,000 schools. Digital India, Startup India, Make in India, Stand up India, and Ease of doing business are also welcome initiatives by the Government. *Niti Aayog* is expected to release national policy on artificial intelligence, which will probably hold the key to the future. Some of the bureaucrats like Niti Aayog's CEO, Amitabh

Kant, are doing their best to develop the ecosystem of innovation. Few State Governments are also taking steps to establish incubation centres like Telangana Government's T-hub and Andhra Pradesh Government's Vizag Fintech hub. Telangana has announced 2020 as 'Year of Artificial Intelligence'. We must realise, that we are miles behind developed countries in R&D; hence, these baby steps won't suffice in our endeavour.

We need to relook at our education policy because currently it's based on a traditional way of gaining knowledge, rather than experiential learning.

Currently, the Government is taking these steps, considering the fourth industrial revolution, as one of the many planned projects; while they must make this as 'the most important project' of the country.

Luckily, India's young generation is not ready to compromise and is ready to take on the world's mightiest. There are several Indian startups like Arya.ai, Artifacia, Nebulaa, and Aindra system working in the field of machine learning.

Almost 400 years back, Francis Bacon, had said *"Knowledge is power",* and now it is evident that countries with the latest technological know-how, are the most powerful and prosperous countries.

8.9 How Populist Measures by Politicians Can Be Detrimental

To explain this, let me tell you a story.

Ramnagar and Laxmangarh are neighbouring villages in the district Pratapgarh, Uttar Pradesh. Both the village's population and size were almost the same in the year 1930; both villages were almost cut off from any development. Kuccha house, no road, no school, no hospital, and no police station, so literally no development; both villages were almost dependent on agriculture. Whatever little extra crop production they were producing, they used to sell in Pratapgarh city, and with the money in hand, they used to buy items of daily use like cloth, medicines, utensils, etc.

Irrigation is the most important component of agriculture. Both villages were fully dependent on rain. Whenever there was good rain, they used to get

healthy crops, i.e., more produce, which in turn, was giving more money in hand. However, the problem was, due to terrain, it was not possible to retain rainwater. Therefore, the risk and dependency on rain were very high.

Sarpanch of Ramnagar thought of building a check dam in his village so that rainwater can be stored in artificial reservoirs with the help of the check dam. Villagers got excited with the idea, and they were willing to contribute manual labour to this noble cause. However, manual labour alone was not enough to build a check dam. It required brick, cement, sand, and steel bars to construct a check dam. To buy all these things, Sarpanch proposed tax on villagers. Villagers had never heard the concept of tax. Some of the villagers opposed the move with logic, that their ancestors have managed to live so long in the same village without it, then, why this unnecessary check dam construction was to be paid through tax. Ramnagar's Sarpanch convinced villagers that the check dam will help in irrigation even when there is less rain, and thus, better agriculture produce was guaranteed, leading to prosperity. After a lot of struggle, the total tax collected, as per land size, was 40,000 rupees (that point of time it was huge money) for the check dam construction.

When neighbouring Laxmangarh villagers heard about the construction of a check dam, they laughed at Ramnagar residents that their Sarpanch was making a fool out of them.

Soon the check dam was ready. Next year, there was good rain; hence, no benefit of the check dam was visible in Ramnagar as there was abundant water. Ramnagar people started blaming Sarpanch for wasting tax money.

Next year there was a huge shortage of rain. In Laxmangarh, where there was no dam, they were blaming nature and helplessly saw the damage of crop, while there was abundant water stored in Ramnagar (courtesy to check dam). Ramnagar had a very good crop. They sold the excess produce to the city and earned handsome money. With better earning, farmers bought high yield seed and fertiliser. These steps clubbed with assured irrigation, had given bumper crop, thus, extra production had given extra money in the hand of Ramnagar villagers, next year too. They bought good clothes, ornaments, or better wheels for their bullock cart with the more money they earned. Now, Ramnagar

villagers were happy with Sarpanch and decided to follow whatever he says. Sarpanch decided that tax imposed and collected tax would be used for common services, based on the amount of crop sales in the city. Total tax collection was 10,000 rupees in that year. He used this amount in constructing kuccha road, a small clinic, and a school. He paid teachers and doctors to come to his village and work. Soon village kids started learning, there was no need to take patients to the city and spend money on transportation (because the medical facility was available in the village), which made villagers happy.

Ramnagar became the model village and an example of prosperity. Nearby village dwellers used to come and admire the development, while Laxmangarh was in the same old shape – no roads, poor people, no school, no clinic, torn clothes. Finally, Laxmangarh residents realised that because of the check dam, Ramnagar people had become prosperous; hence, they agreed to follow the footsteps of Ramnagar. They also constructed the check dam and attained almost similar prosperity.

After a few years, there was an election for Sarpanch in Ramnagar (which attained prosperity first). A lot of candidates filed nomination.

Existing Sarpanch put agenda of good road, better facility in clinic and school. Another candidate, Ramadhar, lured voters with the promise of freebies like pension for old people, marriage assistance money and free bicycle for girls. Ramadhar also promised that there won't be any tax collection from small farmers (i.e., almost 40 per cent of villagers). People of Ramnagar were excited with the poll promise and voted in favour of Ramadhar. Because of tax exemption given to small farmers, the tax collection that year was only 16,000 rupees against the previous year's 20,000 rupees. The new Sarpanch spent almost 12,000 rupees on freebies, which he had promised. Villagers were very happy to see new Sarpanch as a man of words and a true messiah of the poor. Because of freebies and exemption, only 4,000 rupees was left for development work. This amount was not enough to pay doctors and teachers' salaries, buying new medical equipment, medicine, repair of the clinic, school building and roads. Therefore, Ramadhar decided to increase the tax on big farmers. Again, villagers celebrated this step as a masterstroke in narrowing

the gap between rich and poor. This annoyed some of the big farmers, who decided to settle in the city and opted for gain trading, rather than agriculture. Because of this, some of the rich farmers left the village. The next year, tax collection had further gone down to 12,000 rupees. For freebies, the Sarpanch needed the entire amount and he had no money left for salary and repair work.

Soon, teachers and doctors left the village. The villagers were clueless about what was happening. Next year, again, there were elections, this time people were determined to remove Ramadhar and elect the earlier Sarpanch. Ramadhar tactfully created cast tensions among villagers. As he was from the cast of the majority of the population, he again won the elections. Some of the rich farmers who had stayed back bribed Ramadhar to manipulate their earning record so that they have to pay less tax, which Ramadhar did by taking the bribe. No wonder, the next year's tax collection was just 9,000 rupees. With time, the condition of village amenities had further gone down. Ramadhar stopped even pension for old citizens.

While on the other side, in Laxmangarh, people had elected Suresh despite other candidates offering huge freebies. Suresh realised that post-crop harvest, there is always a risk of untimely rain and thus, crops can get damaged. Hence, he constructed a large shed where villagers can keep their produce safely with the help of the collected tax. He constructed a small guesthouse, too, so that merchants from the city could come and stay in the village and buy stuff in bulk.

He paid agriculture experts to come to his village, and educate people on methods to increase farm productivity. All these steps helped produce more and sell at a better price; thus, the next year's tax collection had reached 25,000 rupees.

Next year, he had given loans to small farmers, so that they could buy high-quality seeds and fertilisers, and produce better crops. This idea worked and within two years, poor farmers were in much better condition and returned the loan. Suresh used the tax amount to build pakka road, enhancing facilities in the clinic and the school. He further put in a drainage system. Thus water-borne diseases had gone down.

All these helped in the prosperity of villagers, and soon the tax collection had gone up to 35,000 rupees. More tax collection allowed Suresh to spend money for welfare, i.e., if somebody is in need for costly medical treatment, or a poor person wants to get his daughter married, in such cases, with a common census, money was given to needy people. The village was prospering. The villagers made nice houses, they were wearing good clothes, their children were getting decent jobs in the city (because of education), and people were healthy.

After hearing the progress of Laxmangarh, villagers from Ramnagar visited Laxmangarh and were wondering why this laggard village, that too just two kilometres from their village became so prosperous. Finally, Ramnagar village people realised the importance of tax collection, its right usage, and electing an honest candidate.

Though it was a long story, I hope you got the essence of it.

You might have come across the phrase, *"Courage is man's surest weapon in danger."* Do you want to know how courage plays a role in sports?

Let's understand it from the example of cricket.

8.10 Why Is Courage Important?

In cricket, a spinner does flighted delivery. This means he throws with a loop so that ball spends more time in the air, and after landing on pitch, the ball turns more. With the help of the turn, he beats the batsman and takes a wicket, but the irony here is that the batsman gets more time to read the ball, and can play lofted shot for six. Therefore, the dilemma with bowler is, if he wants a wicket, he has to be mentally adapted to be costly.

The second option with a spinner is to deliver faster; hence, no loop and less turn. This will not allow the batsman to hit a six, but then chances of taking a wicket would be less.

In a test match, spinners bowl flighted balls, as taking a wicket is important, but in T20, spinners bowl a straight ball to avoid giving runs, as in T20 saving runs is more important than taking a wicket.

The real problem comes in ODIs, as both, i.e. taking a wicket and saving runs are equally important. In ODIs, spinners first bowl flighted balls, and if the batsman is in an aggressive mode, he hits few boundaries. Those spinners, who do not want to be costly, start bowling straight ball, hence, they do not take any wicket. The courageous spinners take a risk and keep bowling flighted balls, and get rewarded by taking a wicket. Thus, courage helps people who take risks.

8.11 How Just Looking at the Trend, Forecast Can Go Wrong

Courtesy to first and second industrial revolution, Western world had become wealthy in the fifties. Better lifestyle had led to more demand for shoes, clothes, toys, etc. Producing these items in Western countries was costly, as the salary of workers was high.

Therefore, the solution was to produce household goods in countries where manpower labour was cheap. Japan was reeling under poverty, and labour rate was cheaper; hence, Japan grabbed the opportunity and started the production of household items in bulk. This led to relative prosperity in Japan, but because of that, daily wages had gone up; hence, industrialists started, again, looking for cheap labour countries. South Korea got the manufacturing job, again, because of higher economic activities, they developed, and thus, daily wages went up. Again, product manufactures started looking for cheap labour countries. This time China grabbed the opportunity. Because of this, China became the production hub of the world. Owing to mass production, China also got prosperous, pushing daily wages to go up. Now, industrialists choose Thailand, Vietnam, Philippines and Bangladesh. It's certain that sooner or later, daily wages in these countries would go up. Once the salary goes up, it puts pressure to shift to lower-wage countries.

Which country, do you think, will siege the opportunity?

Looking at the trend, your answer would be sub-Saharan countries. If this is the answer, then you are wrong. Robotics and artificial intelligence will reduce the production cost in the developed world, and it would start manufacturing at a much cheaper price in the developed countries; hence, there is no reason,

why production would shift further to low wage countries. Therefore, never ever, should one conclude without looking at all the parameters.

8.12 Don't Reach a Conclusion in Haste

Until recently, women were not allowed to work at night.

This was because of law made by the British during their rule in India. Therefore, anybody after listening about such an act in the 21st century would think that the British were against women rights, and were doing grave injustice to womenfolk. The good news is that recently this law has been amended so that women can work in the night also.

Today we have electricity, i.e., street light, CCTV camera, police, mobile phone, public transport, cars, as well as, enough population, so any woman going from workplace to her house, can feel safe but 100 years back, it was no such scenario.

100 years back, women workers travelling from workplace to residence in the night were vulnerable to anti-social elements. Thus, the solution was ending daily work hours of women before sunset, to safely go to her residence.

Therefore, if the context is not known, chances are high that wrong interpretation can be done.

Sometimes if we see things with a different perspective, we could have an entirely new learning. Let me share a beautiful analogy.

8.13 How Is Brake Helpful in Driving?

If I ask you, how a brake is helpful in driving, your obvious answer will be, 'brake helps us to stop or slow down the car'.

There is nothing wrong with your answer, but it's not an entirely correct answer. The biggest help of a brake is to allow you to drive the car at a high speed. I guess you might have gotten confused. Okay, let me ask another question, assume your car does not have brakes, now can you drive the car fast? No, because then, you would have an accident. So, the brake helps you drive fast, without worrying about any accidents.

At various stages in life, we find our parents, teachers, mentors, well-wishers and friends questioning our plan, direction, decision, and strategy.

We often get irritated and consider such questions as "brakes" to our plan.

However, just remember, it's because of such questions (brakes), that we have managed to reach where we are today. Without them, we could have skid or met with an unfortunate accident.

We should be deeply and sincerely grateful to all our priceless *brakes*.

Appreciate the "brakes" in your life; without them, we would not be where we are today.

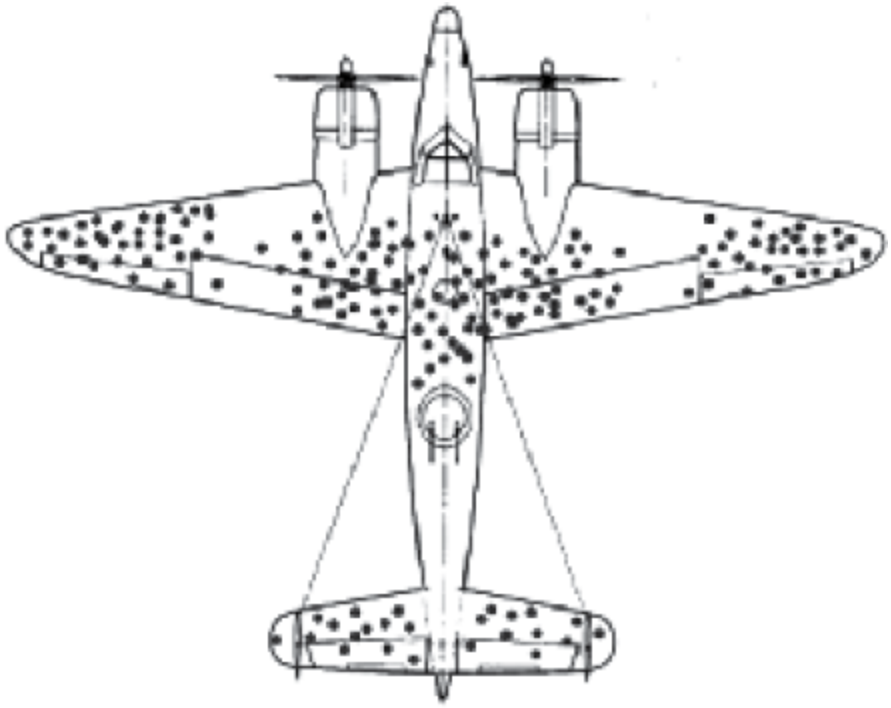
Therefore, what you see and feel has a much deeper meaning.

If you know the meaning, you will respect and value it more.

8.14 Don't Believe in Just Data

During World War II, the Germans were shooting down the British fighter planes. British engineers thought to put extra armour cladding on some parts of the plane, so that even if an enemy's bullet hits the plane, the plane would survive, and return to the base safely. Why did they only focus on some parts? Because, if they had chosen to put armour-clad on the entire body, the weight would have increased considerably; hence, affecting the fighter plane's capabilities. Therefore, researchers at the Centre for Naval Analysis were a given task—to find out the parts of the plane where armour cladding was required the most. Whenever the fighter plane used to come back from the enemy's area, the researchers noted every bullet hole and its damages on the plane's body.

As per the data, most damage was done to the wings, and tail of the plane.



The solution to their problem was simple, it was to put the armour on the plane's wings and tail. Why? Because the data clearly showed that these were the parts where the maximum number of bullets had hit.

However, there was a mistake. The analysis was wrong. The researchers had only looked at fighter planes that had returned to base.

Missing from the data were the planes which never came to back, i.e., shot down in the enemy's area. This means, the data showed the parts of the planes with least damages (hit by a bullet) and hence, the plane fell down. Therefore, armoured cladding was supposed to be on the cockpit, and engine instead.

We make similar mistakes in our life also, we take feedback only from those who like us, and hence, chances are very high that they might not see anything wrong with you; while, if you talk to someone who knows you but is not very close to you, their feedback might help you more.

My close friend started a business of a retail store, just outside the city's limit. His business outlook was based on customers, who used to visit his shop because he used to interact with them, but at the same time, there were many

more prospective customers who were not visiting his shop; hence, he never knew why such customers were not coming.

He was desperate to grow his business; hence, he asked his existing customers for suggestions to improve. The suggestions he received were to add more varieties and advertise in the city about the shop so that more people are aware of it. My friend immediately acted and added more items, and put a hoarding in the city. He was very confident, because he had surveyed his existing customers, and acted accordingly but unfortunately, not much of a success was received.

He was frustrated. One day, he narrated the entire episode to me and asked for support. I asked him where his employees come to work from, i.e., where they resided. He informed me that most of the employees lived in the city and they commute to work in their own vehicle. I told him to give each employee the responsibility check with their neighbours, as to why they were not shopping from his store.

He asked his employees to do the same, and after a week, he compiled the response. The reason why his employees' neighbours were not coming to shop was because of the lack of parking facilities, and high-cost perception. Therefore, this was the main reason. The customers who used to come to his shop were using public transport, hence, never complained. My friend worked on providing valet parking, and announced sales through the hoardings which he had taken, soon customer footfall increased.

Therefore, the survey should include the "planes", which are coming to you, as well as, which are not coming to you; otherwise, the analysis would be wrong.

In this chapter, you have gone through more than a dozen stories and chronologies, each detailed, and proving that if deep diving is done in any subject, more meaning can be drawn.

This skill helps in a strategic role, which is important in top management.

Thus, if you want to be in top management in your favourite company, you have to develop the ability to deep dive.

Next chapter is about prediction skill, i.e., the ability to foresee the future.

CHAPTER 9

POWER OF PREDICTION

"Prediction is not just one of the things your brain does. It is the primary function of the neo-cortex, and the foundation of intelligence."

– Jeff Hawkins

As per Wikipedia, a prediction, or forecast, is a statement about a future event. They are often, but not always, based upon experience or knowledge.

Those who forecast accurately earn respect from all, that's why we respect scientists because they work on new technology and they are the closest to tell what's new is coming in future. Same way politicians, CEOs, and coaches should be a visionary. People follow them because they know and understand the future, much better than a common man understands.

Ability to predict the future comes from the experience of past and current situation. If you are successful in deriving trend, you will be very close to predicting the next course of action, like if you know, Rafael Nadal has won 12 Grand Slams on a clay court, you can guess that he might win his match if it is being played at clay court. Before the match, you will predict and tell your friend that Rafael Nadal is going to win. After that match, your friend, who does not follow tennis too much, would be surprised that your prediction had come true. For him it would be puzzling how you forecasted so accurately, but you know it was a no-brainer. Therefore, if you know statistics, i.e., past record, current form, it's possible for you to forecast.

Similarly, visionaries predict the future and many of us get surprised.

In cricket, bowlers predict about batsman's next shot, hence, he would bowl accordingly. Batsman predicts the next ball from the bowlers. The success of

bowlers and batsman depends on their ability to correctly predict.

In football, during counter-strike, the opponent team's defender predicts if the striker will give a pass to his colleague, or move towards the goal post keeping ball with him. Accordingly, the defender will intercept the opponent.

Therefore, it's very clear from both the examples, that apart from your talent, your ability to predict helps you to succeed.

A politician predicts the next move of his opponent, he also gauges the mood of a citizen. A student predicts the pattern of his exam paper and prepares accordingly.

For prediction, you have to be experienced. For being experienced, you have to be a keen observer. Therefore, your power of observation plays a role in your ability to predict or forecast.

A real estate developer predicts the next happening place, and invests in that place, of course, behind his prediction there would be a lot of research like what is the plan of infrastructure development by the Government, availability of water and conveyance, existing educational institution, etc.

In previous chapters, we have discussed why CEOs are paid multiple times than a labourer. In any company, the job of a CEO is to give direction to the organisation and sail it to safe waters, navigating the turbulent market of uncertainties. One of their key roles is to predict the future.

Let me share the story of PepsiCo, where the CEO accurately predicted the future and took the decision accordingly.

9.1 How Indira Nooyi Changed the Course of PepsiCo

PepsiCo was doing well, when Indira Nooyi took over as CEO, in 2008. As usual, PepsiCo board members were asking for more revenue and return. Her choices were to put more money in the marketing of existing products or to put more money into R&D.

Putting money in marketing would have given quick return while putting money in R&D would have given return in only long-term. The existing Pepsi

products were unhealthy. Indira Nooyi had observed a trend that customers are shifting towards healthy drinks and snacks. So, if she would have put more money on marketing the existing unhealthy products, in the short term, there could have been high profitability, thus, she would make board members happier. Then, in the long-term, PepsiCo would have suffered hugely.

Indira Nooyi took the bold decision of spending money on R&D of low-calorie food products and launched a slew of healthy products. Due to this strategy, Pepsi did extremely well, and finally, Indira Nooyi succeeded.

Here, Indira Nooyi's ability to predict the customer consumption pattern in future helped her to excel in life, and helped her organisation become strong.

9.2 How MNCs' Inability to Predict the Future Led to Failure

George Eastman and Henry A Strong founded Kodak, in 1888; it went on to become a dominant player in the photographic film market during most of the 20th century. Steve Sasson, the Kodak research engineer invented the first digital camera, back in 1975. Obviously being digital, it was filmless photography which confused Kodak's senior management, because Kodak was earning a hell lot of money, through photographic film. This obsession led to missing out to see the big picture of the digital revolution, hence, Kodak decided to put a digital camera in the cold box, and finally filed for bankruptcy, in 2012.

The Finnish company, Nokia, was founded in 1865. In the late'90s and early 2000s, Nokia was the global leader in mobile phones. I am sure you might have used a Nokia phone. Nokia was more focused on hardware, rather than software, while consumers were interested in the latter. The company was overconfident about their brand and believed they could arrive late in the smartphone game and succeed. Android swept the market, and by the time Nokia's management understood, it was too late, and as a consequence, Nokia had to sell its mobile manufacturing division, in 2013, to Microsoft.

In colloquial language, sometimes photocopying is called, 'Xerox.' Do you know, actually Xerox, was first to invent the personal computer? Their product

was much ahead of its time. Unfortunately, Xerox's top management thought there might not be enough market for personal computers; hence, they kept focus on copy machines. Today we know, how wrong they were.

National Geographic magazine started publishing, in 1888. The magazine became very popular because of superior visual storytelling, and it inspired photographers and filmmakers worldwide. In the '80s, some of the producers approached National Geographic to start a cable channel. National Geographic's management thought a cable channel would never beat a magazine, hence, denied the offer. The same producer later launched the Discovery and History Channel. Finally looking at their success, National Geographic decided to launch their own cable channel, in 1997, but it proved to be late.

9.3 Creative Destruction

According to Hindu mythology, the three gods are known as Brahma - the creator, Vishnu - the preserver, and Shiva - the destroyer.

We know the term creator and preserver are the positive words, but destroyer seems to be negative. By the way, it is not; because you cannot bring something new without removing the old.

This philosophy holds true thousands of years back and in the contemporary world too.

Let's understand this, in the economic sense, because that touches our lives the most.

The Austrian economist, Joseph Schumpeter, coined the term "creative destruction", in the forties. He claimed that creative destruction happened during the industrial revolution when machine pushed out craft and artisan production.

The automobile destroyed the horse and other animal led transportation industry, which disappeared buggy makers, and horse trainers; therefore, at first look, it seems destruction was bad. But once many new jobs were created in car factories, car repair shops, road, and bridge construction, people started

admiring the automobiles. Similarly, in the 19th century, when many textile workers lost their jobs to mechanised looms, there were riots in the city, and mechanised looms were blamed for job losses, but later on, when society got prosperous because of the increased productivity, there were many first-of-its-kind jobs created.

People thought that machines were ruining lives of artisans, but it proved that machines produced more jobs, and brought prosperity.

Now, fast forward to 150 years later, we are worried about job losses again, and this time it's because of artificial intelligence, robotics and blockchain.

There are numerous examples of disruption because of these technologies:

- Netflix and Amazon Prime are casting doubt on the future of traditional television programme makers.
- 3D printing would disrupt the manufacturing industry, and reduce the importance of logistics, and inventory management.
- Online news portals would soon end newspaper.
- Language translation, dictation, and proofreading are being done by software, hence, eliminating the role of human support.
- Online bookshop portal like Amazon, have forced brick-and-mortar booksellers to go out of business.
- Payment gateway like Paytm and Google Pay are reducing the need for human bank tellers, and even ATMs.
- Autonomous vehicles would eliminate the need for taxi and truck drivers.
- Airbnb, and Oyo are challenging established hotel chain for their existence.
- FASTag (RFID) technology, is being used in making toll payments directly, thus, eliminating the need for toll-booth attendants.
- Today software decides your cost of flight ticket, as well as, Uber ride fare.

- Software decides if you are a robot or not, i.e., machines are asking humans to prove that they are humans.
- Travel websites such as MakeMyTrip, Expedia and Yatra have eliminated the need for human travel agents.
- Free online brokerage service providers like Robinhood are pushing stockbrokers and advisors to go out of business.

Of course, prima fascia, it looks like there would be an avalanche of job losses, but before concluding, we need to keep in mind that, we faced similar challenges during the industrial revolution, and the concerns proved to be wrong.

In 1870, 50 per cent of Americans were in farming occupation, and today less than 2.5 per cent are; yet more food and agricultural production are happening than ever, and the credit goes to automation in the field of agriculture.

Do you know, currently whatever job you are doing, or whatever is the source of earning you have, there is an 80 per cent chance that it was almost non-existent, just 100 years back? The whole gamut of IT, automobile, electronic manufacturing, medical equipment industry came to existence, in the true sense, in less than 100 years back. These new industries generated millions of jobs, which nobody might have envisaged.

Someone rightly said, *"Humans were never stronger and faster than horse, but human decided to control it, and used it to travel faster."* Same way, humans would control the new technology, and put to the use of improving lives.

Therefore, "creative destruction" is unavoidable, but we have to have faith, that something bigger and better is on the way.

Now, let us discuss a trend, and if we are able to understand it, we can predict many things in future.

9.4 The World is Bringing Things Closer to You

Hundreds of years back, ice was being harvested in cold countries with frozen lakes. On horse cart, the ice blocks were transported to new cities, and old. Looking at the high demand for ice, scientists developed a refrigeration system, but they used to be huge; hence, ice factories were built in the cities. Still, the demand was more, hence, scientists made a household refrigerator, which helped people get ice in their kitchen, whenever they wanted.

Therefore, ice came to your kitchen, from thousands of kilometres. Earlier, for cooking, wood was collected from the jungle, and then some business-minded people started collecting the wood from jungle and started selling it in your city, hence, for convenience, you started purchasing wood from the market, then LPG cylinder came which you were supposed to collect from LPG distributor, then LPG cylinder started coming to your house, and now through the pipe, gas is being delivered to you.

Earlier, for entertainment, you were going to another city to watch the theatre. Looking at the demand, movie hall was made available in your own city, and then television helped you get the entertainment in your own house, but you need to travel from bedroom to dining room, therefore, this problem solved by entertainment through your mobile.

Earlier, you were bringing water from the river or pond, which used to be many kilometres away. Wells were dug out in the village, hence, that saved distance you had to travel, but still, it was some distance away from your house, hence, the solution was introduced as a hand pump. Now, you get water through water pipeline to your house.

What about money? Of course, money has also moved closer to you; the first bank came to your city, then ATM came to your vicinity, and now you can do mobile transactions.

Obviously, you might have realised, that whatever you want desperately, comes near you.

Therefore, if you want to become an entrepreneur, you can explore what is that distant thing which we need, and can be brought closer to us. Now, as I

have given your million-dollar recipe, go ahead to conquer the world. If something can stop you, it is your fear and ignorance.

All the best!

ACKNOWLEDGEMENTS

First and foremost, I would like to thank God Almighty for giving me the ability and opportunity to write this book. Without His blessings, this achievement would not have been possible.

I am thankful to people around me for their support, encouragement, inspiration and guidance.

The ideas, understanding and creativity we develop are the result of insights provided by many known and unknown people. Thus, I am thankful to each and everybody who directly or indirectly helped me learn and shape my thought process.

I would like to thank my school friends Abhishek Singh, Abhishek Khandelwal, Adil Zia Khan, Amiyatosh Rai, Anilesh Singh, Ashish Mishra, Ashish Singh, Chandan Kumar, Dharmendra Mishra, Jaishankar Jha, Mahesh Soni, Manish Tripathi, Raghvendra Jha, Rahul Bharti, Ritesh Singh, Shashi Prakash Singh, Savesh Jha, Sumit Srivastava, Umendra Agrahari, and Vivek Shekhar for supporting me.

I would like to thank my college friends, Abhinav Dwivedi, Abhishek Srivastava, Amardeep, Amit Mandal, Anish Varghese, Anshuman Sinha, Ashish Ranjan, Asmon Fredrick, SM Azmi, Bipin Shukla, Brijesh Prakash Singh, Dhiraj Singh, Dilip Kushwaha, Kamlesh Singh, Manas Mishra, Manish Trivedi, Manish Singh, Nishant Saroha, Nitin Singh, Paramanad, Sandeep Yadav, Shiv Narayan Singh, Shiv Sharan, Subroto Sarkar, Sudhir Nayaran Mishra, Vaibhav Srivastava, Vineet Upadhyay, Yogendra Pratap Singh and Zafar for believing in me.

I would like to thank my colleagues of Mahindra & Mahindra Antony Cherukara, Amit Singh, Atul Joshi, Bhalchandra Mane, Burhan Hussain,

Kumar Singh Negi, Kannan M, Mahesh, Nagaraju, Nilay Yadav, NVLN Swami, Prashanth Sanglikar, Pratap Singh, Rakesh Garlapati, Sanjay Poul, Sanjeev Jaiswal, Somasekhar, Sourabh Mishra, Sriram V, Tarun Singhal and Vineet Thapaliyal for helping me.

I would like to thank my colleagues of Maruti Suzuki Amit Raju, Amrinder Gill, Ankur Sharma, Apurva Singh, Arun Malhotra, Gaurav Sharma, Gaurav Srivastava, Gautam Takoo, H.S Brar, Himadri Roy, Himanshu Shekhar, Jyoti Malhotra, Mahesh Kale, Manohar Bhat, Mohit Jindal, Neeraj Sharma, Nitin Kumar, Peter Ipe, Puneet Bansal, Punit Chaddha, Rajesh Singh, Rakesh Srivastava, Salil Narang, Shashank Sharma, Shashank Srivastava, Shobhit Agarwal, Sudhir Sahni, Sunny Kanwar, Sushil Vaidya, Vishal Dawra, Vivek Anand, Vivek Paliwal and Vikram Cairae for encouraging me.

I would like to thank my colleagues of Mercedes-Benz India Abhinay Vishnoi, Abhishek C Singh, Abinand, Ajinkya Kulkarni, Alok Badamikar, Alok Angre, Ameya Chandakkar, Amit Atre, Amit Jain, Amit Thete, Amod Moghe, Anantharaman T, Aniket Dambare, Anita Khisti, Anmol Sahore, Anshul Mehta, Anuj Aryan, Apoorv Goyal, Asha Narhire, Ashish Ghanekar, Ashish Kohli, Ashish Salvi, Ashok Sharma, Atul Lodha, Avanish Tiwari, Babita Dhar, Balwant Singh, Boris Fitz, Chandrashekar Prasad, Chetan Bokare, Chhaya Tiwari, Colleen D'souza, Dattatraya Sakhare, David Daniel, Debashis Mitra, Deepa Mistry, Deepak Soni, Deepika Panth, Devendra Thakur, Dinesh Advant, Fredy Varghese, Ganesh Rathod, Gaurav Sharma, Ghananeel Kelkar, Gopa Menon, Harkirat Singh, Harshavardhan Chikodi, Himanshu Jaisinghani, Ishan Tupe, Jamsheed Bhadha, Jayaprakash Jain, Jessy John, Jitendra Mhalgi, Jyotsna Mattoo, Khushbu Panbude, Kiran KP, Koushik Bhattacharya, Kshama Pathak, Kumar Vikrant, Leena Galvankar, Madangopal Bhardwaj, Mahesh Bhide, Mahesh Rege, Maithili Adhye, Manali Sahasrabuddhe, Manish Thakore, Martin Schwenk, Mary Francis, Mayur Thakur, Meghna Arora, Milind Doiphode, Milind Pendse, Mohit Agarwal, Muralidhar Nayak, Namrata Sharma, Nandkumar, Nikhil Desai, Nikunj Grover, Nilesh Pawar, Nilutpol Gogoi, Nitin Mandke, Nitin Shitole, Parag Gandhi, Piyush Arora, Prabir Ghosh, Pradeep Srinivas, Prajakta Bedadur, Pranav Pataskar, Prasad Salunke,

Prashant Kulkarni, Prashant Sankeshwar, Prashant Shiradkar, Pratap Patjoshi, Prathamesh Khanvilkar, Priya Naik, Pushpak Pawar, Rahul Kulkarni, Rajesh Inamdar, Rajkumar Reddy, Rashmi Valatkar, Reuben George, Riju R, Rishikesh Hase, Ritu Pant, Robin Jacob, Roger Heymann, Rohit Damle, Rohith Kumar, Rohit Raina, Sachhin Jatteppanavar, Sachin Dulhani, Sameer Sharma, Sameer Surani, Samrat Sinha, Sandeep Gadkari, Sandeep Sawant, Sangeeta Nagarkar, Sanjay Kochar, Sanjeev Mandpe, Santosh Kharabi, Sapnil Shah, Sarang Joshi, Sarika Salunke, Saurabh Borwankar, Setu Joshi, Shashikant Ingole, Sanjay Katti, Sheeja Kumar, Sheetal Bhagwat, Shekhar Bhide, Shekhar Daschowdhury, Shikha Tripathi, Shirish Bhakare, Shreyas Cadambi, Shrikant Deshmukh, Shweta Singh, Siddharth Gandhi, Sonal Bhardwaj, Sonali Taneja, Sourabh Joshi, Stephan Kroel, Sudipta Mukherjee, Suhas Kadlaskar, Sumit Bhambhani, Sunil Dagar, Suresh Komirishetty, Swaroop Naik, Swati Chaturvedi, Tarun Nagar, Thompson Xavier, Tukaram Parab, Tushar Thakare, Tushar Wakankar, Vaibhav Adwant, Varsha Nazareth, Varun Jhunjhunwala, Velankanni Fernandes, Venkatanarayanan S, Vignesh Shankar, Vihar Ramani, Vikas Kumaria, Vikas Phatak, Vikas Sharma, Vinay Otavkar, Vinayak Mane, Vinod Pardeshi, Vivek Komath, Yadunath Kulkarni, Yash Pinge, Yashovardhan Bichu, Yohan Irani and Zahuruddin Khan for their valuable advice and insights.

I would like to extend my sincere thanks to my friends and well-wishers Abhijeet Awate, Anil Sinha, Anish Behl, Atul Sharma, Atul Bapat, Bhuvaneshwar Singh, BL Singh, Deepshikha, Kamal Gaur, Nikhil Khanna, Nilesh Jain, Mohit Makani, Piyush Malhotra, Rishabh Agarwal, RP Srivastava, Saleem Siddiqui, Sanjay Singh, Sandeep Jain, Sanjeev Pahuja, Santosh Ranjan, Sominder Singh, Surendra Prajapati, Torit Bagchi, Umesh Chaudhary and Yuvraj Manish for all their advice.

I am grateful to Aakash Khaunte, Ajmal A Wahab, Amar Sheth, Amit Mittal, Amith Reddy, Sivakumar, Arun Surendra, Bhupesh Sahni, Deepak Joshi, Deven Bhandari, Dinesh M, KK Shetty, Krishna M, KS Cheema, Mahesh Dave, Mandeep Dhingra, Mohan Mariwala, MS Vij, Murugan, Neeraj Agarwal, Nishaad A, Paras Somani, Raj Naresh Singh, Rajat Bansal, Rajiv Gambhir,

Rajiv Menon, Ravi Talwar, Ravishankar, Ravichandran S, Rohan Talwar, Sachin Honavar, Sanjay Thakkar, Sanjeev Dahuja, Shaji V, Shamsher Singh, Sharath Vijayaraghavan, Shivateja, M Shyam Shetty, Srineevas C, SSR, Sunil Madhyani, Suresh Agarwal, TT Padmanabhan, Tushar Kumar, Vidur Talwar, Vikas MJ and Yashwant Jhabakh for encouraging me.

I am thankful to Santosh Iyer and Alex Thomas for inspiring me and providing guidance.

I sincerely thank my brother Vinod Tripathi who not only helped me in editing the book but also helped me in enriching this book.

I am thankful to Banwari Lal Sharma, Harish Chandra, Saurabh Sharma, and Smruti Jamdade for reading the manuscript and giving me valuable advice on how to make the book interesting and useful.

I am thankful to all my teachers, professors, and batchmates of Kendriya Vidyalaya, ATL School, AAIDU and IGTC.

Thanks to everyone in my publishing team at Notion Press Media.

I am thankful for all my family members' and relatives' love, affection and encouragement.

Most importantly, I am sincerely thankful to my beloved wife Suchita and my smart kids Riddhi and Trish who cooperated, encouraged and supported me.

DISCLAIMER

The content and views expressed in the book are purely the author's (personal). The employer of the author, i.e. Mercedes-Benz Company, has no role in conceptualizing and printing of the book. The purpose of this book is not to hurt the sentiments of any person, cast or group of people.

BIBLIOGRAPHY

Chapter 1: Power of Observation

- Malcolm Gladwell, Blink: The Power of Thinking without Thinking, 2005
- Schultz, Howard; Yang, Dori Jones (1997), Pour Your Heart Into It: How Starbucks Built a Company One Cup at a Time, New York: Hyperion, ISBN 0786863153
- Kendra Cherry, How Observational Learning Affects Behavior, Updated on September 06, 2019, https://www.verywellmind.com/what-is-observational-learning)
- https://ruachwords.org/how-observational-learning-affects-behavior/
- Prachi Juneja, Curious Observation – First Step in Decision Making Process, https://www.managementstudyguide.com/curious-observation.htm
- James Clear, Famous Biologist Louis Agassiz on the Usefulness of Learning Through Observation. https://jamesclear.com/louis-agassiz
- Dave Wedland, Creativity Begins With Observation, 2019, https://www.forbes.com/sites/forbesagencycouncil/2019/04/08/creativity-begins-with-observation/#4e838e622d40

Chapter 2: Power of Connecting the Dots

- Pavan Kulkarni, Amid Agrarian Crisis, India is Pressured By US to Reduce Farm Subsidies, 2008. https://www.newsclick.in/amid-agrarian-crisis-india-pressured-us-reduce-farm-subsidies
- Richa Kumar, Putting Wheat in Its Place, Or Why the Green Revolution Wasn't Quite What It's Made Out to Be, 2016.

https://thewire.in/agriculture/green-revolution-borlaug-food-security

- Bihar GK, Freight Equalization Policy 1952 and Bihar, 2014, www.bihargk.com/freight-equalization-policy-1952-and-bihar/
- Joydeep Deb, The Cobra Effect in Business Management,2019 https://www.joydeepdeb.com/blog/cobra-effect-business-management.html
- Rob Dunn, The Story of the Most Common Bird in the World, 2012 https://www.smithsonianmag.com/science-nature/the-story-of-the-most-common-bird-in-the-world-113046500/
- David DiSalvo, How Alan Turing Helped Win WWII And Was Thanked With Criminal Prosecution For Being Gay, 2012, https://www.forbes.com/sites/daviddisalvo/2012/05/27/how-alan-turing-helped-win-wwii-and-was-thanked-with-criminal-prosecution-for-being-gay/#1044ab1b5cc3
- https://www.biography.com/scientist/alan-turing, 2014
- Marck Lorch, Five chemistry inventions that enabled the modern world, 2015, https://theconversation.com/five-chemistry-inventions-that-enabled-the-modern-world-42452

Chapter 3: Power of Communication

- Verbal Communication Skills, https://www.skillsyouneed.com/ips/verbal-communication.html
- Communication, https://www.toppr.com/guides/business-studies/directing/communication/
- https://genius.com/Winston-churchill-we-shall-fight-on-the-beaches-annotated?
- The Fireside chats, 2010, https://www.history.com/topics/great-depression/fireside-chats
- National Park Service, Roosevelt and Churchill: A Friendship That Saved The World, https://www.nps.gov/articles/fdrww2.htm

Chapter 4: Power of a Purpose

- Bard Leonard, Why Is Life Purpose Important? https://www.takingcharge.csh.umn.edu/why-life-purpose-important
- Jat Rana, Career strategy: Don't sell sugar water, 2017 https://www.cnbc.com/2017/03/24/career-strategy-dont-sell-sugar-water.html
- Guusje Bendeler, 5 Reasons why purpose matters to employees, 2018, https://www.thinkparallax.com/Insight/5-reasons-why-purpose-matters-to-employees/
- Varun, https://www.killcure.com/2009/10/08/drea ms-are-very-important/
- Martin Luther King Jr, https://www.americanrhetoric.com/speeches/mlkihaveadream.htm

Chapter 6: Power of Out-of-the-box Thinking

- Mayo Oshin, How to think outside the box and innovate new ideas, 2020 https://www.theladders.com/career-advice/how-to-think-outside-the-box-and-innovate-new-ideas
- George Friesen, The $8 Million Replacement for a $20 Dollar Fan, 2013 workforcesolutions.stlcc.edu/2013/making-lean-stick-8-million-dollar-fan/
- Arushi Vats, How an 'Ayurvedic' Vicks took over, 2016 India https://www.livemint.com/Sundayapp/1rx2BI7YhKE27460siRuyH/How-an-Ayurvedic-Vicks-took-over-India.html

Chapter 7: Power of Perseverance

- Yogesh Sharma, Talent is not enough, champions have attitude and the strength to fight – Perseverance, 2015 https://www.linkedin.com/pulse/talent-enough-champions-have-attitude-strength-fight-yogesh-sharma

- Failures, https://howtosucceedwhenyouaredifferent.wordpress.com/2019/01/03/failures/
- Kevin Eberle, 10 Famous People Who Proved Perseverance Pays Off, 2015 https://www.business2community.com/leadership/10-famous-people-who-proved-perseverance-pays-off-01242413
- World Economic Forum, https://www.4martech.com/about-us/

Chapter 8: Power of Deep Dive

- Farah Mohammad, Why Are Diamonds More Expensive Than Water? 2018 https://daily.jstor.org/diamonds-expensive-water/
- Carly Hallman, A Timeline of Car History, https://www.titlemax.com/articles/a-timeline-of-car-history/

ABOUT THE AUTHOR

Manoj Tripathi is a Sales and Marketing professional in Mercedes-Benz India, the leading German automobile company. He is an active blogger and a guest author at Business World. Being an avid reader and traveller helps him understand economic issues and business challenges in a better way. He uses his 16 years of professional experience to suggest suitable solutions. He is currently settled in Pune, India.